EXHIBIT F

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1

 1   UNITED STATES DISTRICT COURT

 2   NORTHERN DISTRICT OF CALIFORNIA

 3   SAN FRANCISCO DIVISION

 4

 5

 6   ORACLE AMERICA, INC.,   )

 7   Plaintiff,   )

 8   vs.   )   No. CV 10-03561 WHA

 9   GOOGLE, INC.,   )

10   Defendant.   )

11   _____)

12

13

14

15   CONFIDENTIAL TESTIMONY – ATTORNEYS' EYES ONLY

16   VIDEOTAPED DEPOSITION OF JAMES KEARL

17   MONDAY, MARCH 26, 2012

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25   PAGES 1 – 226

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 7        Videotaped Deposition of JAMES KEARL, taken on
 8    behalf of Plaintiff, at Keker & Van Nest, 633 Battery
 9    Street, San Francisco, California, commencing at
10    9:37 a.m., Monday, March 26, 2012 before Kelli Combs,
11    CSR 7705.
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 3     FOR THE WITNESS:
 4        FARELLA BRAUN & MARTEL
 5        BY:  JOHN L. COOPER, ESQ.
 6        ALYSON FRANCO
 7        235 Montgomery Street
 8        San Francisco, California 94104
 9        (415) 954-4400
10
11     Also Present:
12     Philip Knolls, Videographer
13     Andrew Tenkin, In-house counsel for Oracle
14     Greg Adams with Charles River Associates
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 1     APPEARANCE OF COUNSEL:
 2
 3     FOR PLAINTIFF ORACLE AMERICA, INC.:
 4        BOIES, SCHILLER & FLEXNER, LLP
 5        BY:  FRED NORTON, ESQ.
 6        STEVEN C. HOLTZMAN, ESQ.
 7        1999 Harrison Street, Suite 900
 8        Oakland, California 94612
 9        (510) 874-1000
10        fnorton@bsfllp.com
11
12     FOR DEFENDANT GOOGLE, INC.:
13        KEKER & VAN NEST, LLP
14        BY:  DANIEL PURCELL, ESQ.
15        633 Battery Street
16        San Francisco, California 94111-1809
17        (415) 733-6697
18        dpurcell@kkvn.com
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 1              JAMES KEARL,
 2     after having been duly sworn, testified as follows:
 3                  ---o0o---
 4
 5        THE VIDEOGRAPHER:  Good morning, Counsel.    09:03:25
 6    My name is Philip Knowles, of Veritext National
 7    Deposition and Litigation Services.  The date today
 8    is March 26th, 2012, and the time is approximately
 9    9:03 a.m.
10        This deposition is being held in the        09:03:39
11    office of Keker and Van Nest, located at 633 Battery
12    Street, on the fourth floor, in the City of
13    San Francisco, California 94111.
14        The caption of this case is Oracle America
15    versus Google, Inc., in the United States District    09:03:54
16    Court for the Northern District of California,
17    San Francisco Division.  The name of the witness is
18    James Kearl.
19        At this time, the attorneys will identify
20    themselves and the parties they represent.        09:04:07
21        MR. NORTON:  Fred Norton, on behalf of
22    Oracle America.
23        MR. HOLTZMAN:  Steve Holtzman, for Oracle
24    America.
25        MR. COOPER:  John Cooper, Farella, Braun &    09:04:20
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1   Martel. I represent Dr. Kearl.   09:04:21
2   MR. TENKIN: Andrew Tenkin, Oracle
3   America.
4   MR. PURCELL: Dan Purcell, Keker & Van
5   Nest. I represent Google.   09:04:29
6   MR. ADAMS: Gregory Adams, with CRA
7   International.
8   THE VIDEOGRAPHER: Our court reporter,
9   Kelli Combs of Veritext, will swear in the witness.
10   (Deponent sworn.)   09:04:41
11   THE VIDEOGRAPHER: You may proceed.
12   MR. COOPER: Counsel, at the outset, as I
13   indicated prior to the beginning of the deposition,
14   Dr. Kearl has a correction he would like to make to
15   Paragraph 86 of --   09:05:00
16   He'd like to make a correction to
17   Paragraph 86 of his report.
18   MR. NORTON: Please, go ahead.
19   THE WITNESS: In Paragraph 86, in order to
20   get the total value of the deal, I added the value   09:05:17
21   of Sun to the value to Google. That's the
22   denominator. And then divide that into the value of
23   the Sun to get an estimate of the portfolio royalty.
24   I should have netted out, of the part that
25   goes into the denominator, the transfer between   09:05:33

6

1   Google and Oracle for the $20 million payments,   09:05:35
2   upfront payments, and the $25 million capped
3   royalty. The present value of those two numbers is
4   a little less than $100 million. So the denominator
5   would be slightly smaller and, therefore, the   09:05:51
6   estimated royalty slightly larger.
7   EXAMINATION
8   BY MR. NORTON:
9   Q   All right. Thank you.
10   We'll probably come back to that a little   09:06:08
11   bit later in the morning.
12   Why don't we start with the easiest
13   question of the day. Would you rather I call you
14   Professor or Dr. Kearl?
15   A   Whatever works for you.   09:06:19
16   Q   I probably will switch back and forth
17   because I won't remember.
18   Why don't we start by marking your report,
19   and I'll ask the court reporter, first, to mark
20   Exhibit 570 -- I'm sorry -- 576.   09:06:28
21   (Deposition Exhibit 576 marked
22   for identification.)
23   MR. NORTON: Then 577.
24   (Deposition Exhibit 577 marked
25   for identification.)   09:06:52

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1   MR. NORTON: Then 578.   09:06:52
2   (Deposition Exhibit 578 marked
3   for identification.)
4   BY MR. NORTON:
5   Q   And the way I organized these may be a   09:07:44
6   little differently from how you had them, but
7   Exhibit 576 should be your report. Exhibit 577
8   should be the tables to your -- the appendices to
9   your report. And 578 should be the tables; is that
10   correct?   09:08:02
11   A   That's correct.
12   Q   Okay.
13   Now, other than the change that you
14   described to Paragraph 86 of your report, do you
15   have any other changes to the report that you want   09:08:15
16   to make?
17   A   No.
18   Q   Can you just describe for me your
19   background in calculating patent damages?
20   A   I've been retained in a number of cases   09:08:27
21   either to do reasonable royalty or lost profits
22   and have filed reports on those matters.
23   Q   And how many cases have you calculated a
24   reasonable royalty for patents?
25   A   Probably seven or eight. You need to   09:08:53

8

1   clarify what you mean "cases." Would this be   09:08:56
2   formal testimony? It would be less than that, but
3   I've worked on matters in which there has been
4   preliminary work done, often settled, in
5   probably -- I don't know -- maybe ten, eight to   09:09:08
6   ten.
7   Q   Then of that eight to ten, how many cases
8   did you give testimony concerning a reasonable
9   royalty in a patent case?
10   A   I think only two.   09:09:20
11   Q   And those two, did you testify on behalf
12   of the plaintiff or the defendant or one of each?
13   A   Both cases was on behalf of the
14   defendant.
15   Q   And have you --   09:09:34
16   Prior to this case, have you ever been
17   engaged to calculate a reasonable royalty copyright
18   case?
19   A   Well, yes. Damages in a very large
20   copyright case, in a couple of cases, yes.   09:09:46
21   Q   And did you give testimony concerning the
22   value of a license in a copyright case?
23   A   I was deposed in at least one of those
24   cases. It's since disappeared into practice, as
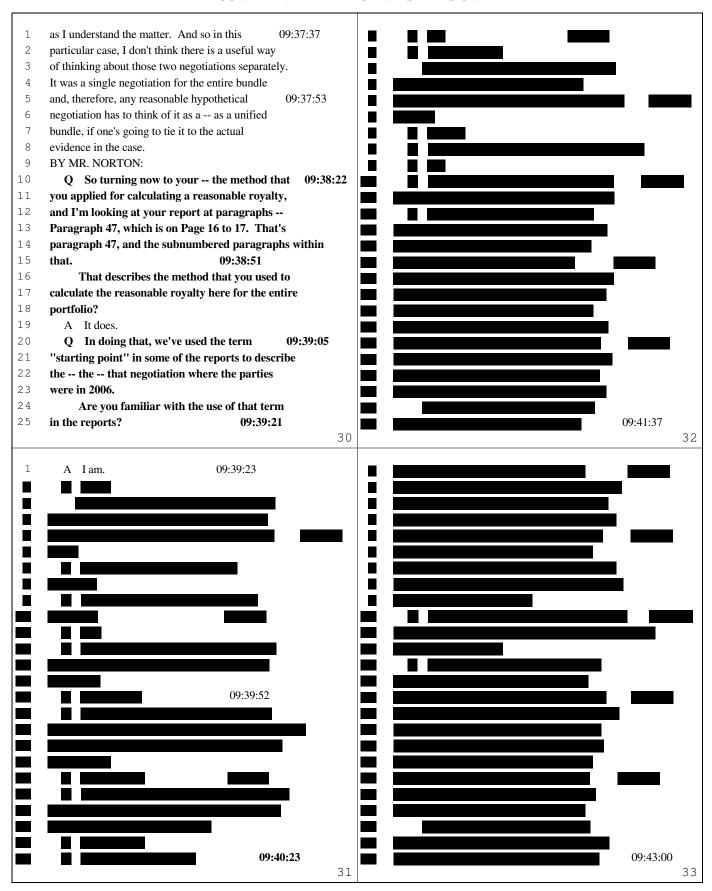25   the lawyers say. I don't recall. I don't think I   09:10:06

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1   gave testimony in the other case.   09:10:10
2   Q   And in the copyright case in which you
3   gave testimony, did you testify on behalf of the
4   plaintiff or on behalf of the defendant?
5   A   The defendant.   09:10:18
6   Q   What was the nature of the product in the
7   copyright case in which you gave testimony on a
8   reasonable royalty?
9   A   Software.
10   Q   And the two patent cases in which you gave   09:10:30
11   testimony on behalf of the defendants concerning a
12   reasonable royalty, what was the nature of the
13   products in those cases?
14   A   They were both medical devices.
15   Q   In the copyright case that involved   09:10:47
16   software, what kind of software was that?
17   A   UNIX software.
18   Q   Do you recall the name of that case?
19   A   Yes, it's IBM versus SCO or SCO versus
20   IBM.   09:11:02
21   Q   If you could just describe for me what you
22   understand your task in this particular case to be?
23   A   I was retained by the Court, as I
24   understand the matter, to originally critique the
25   experts of each side. And then when the trial was   09:11:20

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1   delayed, Judge Alsup asked if I could come up with   09:11:24
2   an independent damages estimate. My response was
3   I could within the confines of the record. That
4   is, I couldn't go out and do independent research
5   beyond literature research. So I think it's fair   09:11:41
6   to say that it's morphed over time from at least
7   what it appeared to be last fall, as the trial has
8   been delayed.
9   Q   But is it fair to say that, ultimately,
10   your task included the job of coming up with an   09:11:55
11   independent opinion as to the reasonable royalty of
12   the patents-in-suit in this case?
13   A   Right, but within some fairly tight
14   constraints. It's my understanding that Judge
15   Alsup ruled that I would not be allowed to opine   09:12:09
16   on matters that he had precluded experts on either
17   side from testifying about, so it's not a sort of
18   go anywhere effort. It's within the confines of
19   his orders over the last three months.
20   Q   But with that understanding, it would be   09:12:39
21   fair to say that your task included the job of
22   calculating a reasonable royalty for the
23   patents-in-suit in this case?
24   A   Yes.
25   Q   And also to calculate a reasonable royalty   09:12:50

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1   for the copyrights in suit?   09:12:54
2   A   Correct.
3   Q   And to calculate infringer's profits for
4   copyrights in suit?
5   A   Correct.   09:12:59
6   Q   And lost profits for those copyrights?
7   A   Correct.
8   Q   And for each of those measures of damage,
9   have you reached an independent opinion as to what
10   the damages are in this case?   09:13:07
11   A   Within the confines of Judge Alsup's
12   orders, yes.
13   Q   In order to reach your opinions, did you
14   limit yourself to the documents --
15   With respect to documents, did you limit   09:13:27
16   yourself to the documents that were cited by the
17   parties' experts in their reports?
18   A   Mostly, but as you'll note in the
19   footnotes, there are some documents that we went
20   out and got that we judged to be relevant to this   09:13:43
21   case.
22   Q   When you mention documents that you went
23   out and got, are you referring to literature and
24   things in the public record?
25   A   Yes.   09:13:58

                                                        12

1   Q   So to the extent you rely on documents   09:13:59
2   produced by the parties, did you limit yourself to
3   documents that were cited in one of the expert's
4   reports?
5   A   Yes.   09:14:09
6   Q   Did you review deposition testimony of
7   witnesses in this case?
8   A   I have.
9   Q   Did you limit yourself to deposition
10   testimony that was cited by one of the experts in   09:14:19
11   the case?
12   A   No.
13   Q   So you reviewed deposition testimony that
14   had not necessarily been cited by any expert?
15   A   That's correct.   09:14:30
16   Q   And did you have access to all of the
17   deposition transcripts in the case?
18   MR. COOPER: Objection; calls for
19   speculation.
20   THE WITNESS: Yeah, I think so, but I'm   09:14:43
21   not sure because we don't have a listing of all of
22   the depositions that were taken.
23   BY MR. NORTON:
24   Q   Are you aware of any depositions for which
25   you -- any depositions that were taken for which you   09:14:52

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1   did not receive a transcript?   09:14:56
2   A   No.
3   Q   Now, have you conducted any interviews
4   with any employees of any party?
5   A   Let me clarify. I assume that retained   09:15:17
6   experts are not defined as employees of the
7   parties.
8   Q   I meant to carve those out. Let me ask it
9   a little bit differently.
10   You have spoken with each of the parties'   09:15:26
11   retained damages experts, correct?
12   A   I have.
13   Q   Some of the parties' retained technical
14   experts?
15   A   I have.   09:15:33
16   Q   Other than the parties' retained technical
17   experts and retained damages experts, have you
18   spoken to any employee of any party?
19   A   No.
20   Q   To the extent that either Professor   09:15:44
21   Cockburn or Dr. Leonard or Dr. Cox relies on
22   interviews with employees of a party, have you
23   considered those interviews?
24   A   To the degree that they're reflected in
25   the reports, and then there were subsequent   09:16:06

14

1   depositions of the people that they may have   09:16:09
2   interviewed, yes.
3   Q   To the extent that the expert --
4   To the extent that Dr. Cox relied on
5   interviews of people, or a person who was not   09:16:19
6   subsequently interviewed, at some point deposed, did
7   you rely on those interviews?
8   A   Again, only to the degree that he
9   reflects those interviews in his own reports.
10   Q   Is there anything that you did to assess   09:16:38
11   the accuracy of the statements that were relayed to
12   Dr. Cox by the people he interviewed?
13   A   No.
14   Q   In the course of reaching your opinions,
15   did you make any assumptions?   09:16:58
16   A   Yes.
17   Q   Is it possible for you to tell me what
18   your primary assumptions are?
19   A   I think a fair answer to that is that
20   they are reflected in the report. We've been --   09:17:13
21   tried to be very clear about when I've made an
22   assumption. And without walking through the
23   report, I'm not sure I can give a fair answer to
24   that question.
25   Q   That's fair. Thank you.   09:17:22

15

1   Now, did you understand in the course of   09:17:31
2   your task, that you were permitted to come up with
3   any methodology you chose to best calculate a
4   reasonable royalty for the patents-in-suit?
5   A   I interpreted Judge Alsup's instruction   09:17:48
6   to me that I was to derive an independent estimate
7   as allowing for that, yes, subject, as I said now
8   a couple of times, to his subsequent orders
9   limiting the other experts on the case.
10   Q   And so with respect to the reasonable   09:18:09
11   royalty methodology -- reasonable royalty
12   methodology in this case, have you reached an
13   opinion as to what the best way is to calculate a
14   reasonable royalty for the patents and copyrights in
15   suit?   09:18:22
16   A   I have.
17   Q   Okay.
18   And --
19   A   Let me back up. I've come up with a
20   methodology for estimate -- for the best way to   09:18:30
21   estimate the reasonable royalty on the portfolio
22   that the parties were discussing in 2006. The
23   allocation of that portfolio royalty to the
24   patents and copyrights in suit is constrained by
25   Judge Alsup's orders.   09:18:50

16

1   Q   Let me break that down a little bit.   09:18:54
2   So with respect to calculating a royalty
3   on the portfolio that the parties were discussing in
4   2006, you have come up with what you believe is the
5   best way to calculate that royalty; is that correct?   09:19:06
6   A   Correct.
7   Q   Sorry. I didn't mean to speak over you.
8   And I know it's in the report, but in
9   brief form, what is the best way to calculate that
10   royalty?   09:19:20
11   A   Has really three parts: One is to begin
12   with the assumption that the parties would have
13   negotiated either a percentage of revenue or a per
14   handset royalty in 2006; that that would then be
15   applied to actual Google revenues going forward;   09:19:46
16   and then to focus on the estimation of that per
17   unit or percentage royalty by looking at the
18   expectations of both parties in 2006 and how they
19   valued the 2006 deal, backing out from the deal
20   the things that were not associated with the   09:20:14
21   intellectual property.
22   Q   That allows you to calculate a per handset
23   or per revenue dollar royalty rate?
24   A   Correct.
25   Q   You said that --   09:20:31

17

1   Well, with respect to apportioning that   09:20:33
2 2006 royalty rate, have you come up with what you
3 believe is the best methodology for apportioning to
4 the intellectual property in suit?
5   A   I don't think that's what I testified   09:20:56
6 to. What I said was after -- after the --
7 determining the reasonable royalty on the
8 portfolio, then the apportionment is really
9 constrained by Judge Alsup's orders. And I
10 adopted the group and value methodology of   09:21:10
11 Professor Cockburn, but I'm not opining on whether
12 that's the best methodology for doing this.
13   Q   When you say, "whether that's the best
14 methodology for doing this," what is "this"?
15   A   Apportioning.   09:21:27
16   Q   Did you consider other ways of
17 apportioning?
18   A   Over the course of the last six months,
19 yes, a number of different ways.
20   Q   Did you identify any means of apportioning   09:21:39
21 that is better than Professor Cockburn's group and
22 value approach, as permitted by Judge Alsup's
23 orders?
24   A   No.
25   Q   When I ask you "better," I mean, better in   09:21:57

18

1 your estimation as an economist.   09:21:59
2   A   No.
3   Q   Are there other methods that you
4 considered to be reasonable methods of apportioning,
5 although perhaps not as good as the group and value   09:22:25
6 approach permitted by Judge Alsup?
7   MR. COOPER: Objection as to form.
8   THE WITNESS: Let me ask a clarifying
9 question --
10 BY MR. NORTON:
11   Q   Of course.
12   A   -- of both attorneys.
13   Am I permitted to talk about things that
14 Judge Alsup has excluded in answer to that
15 question?   09:23:15
16   MR. PURCELL: I think so.
17   MR. NORTON: I agree with Mr. Purcell.
18   MR. PURCELL: This is just a deposition.
19 Your testimony at trial might be limited, but I
20 think you can answer.   09:23:28
21   THE WITNESS: Fair enough. Then I think
22 the approach that looks at the change in market
23 share, predicted change in market share, was a good
24 approach, an interesting approach.
25

19

1 BY MR. NORTON:
2   Q   So an approach that looks at the change in
3 market share of Android as a result of the
4 infringement?
5   A   Yes.   09:23:52
6   Q   And uses that to apportion?
7   A   Yes.
8   Q   Did you reach an opinion as to whether
9 that approach was, as a matter of economics, was
10 better or worse than the group and value approach?   09:24:03
11   A   Both approaches have some problems, and
12 I think both approaches have some strengths, so
13 there is not -- it's not an easy call, which is
14 which one dominates the other.
15   Q   Did you conduct an analysis, an   09:24:21
16 apportionment analysis, using the changes in market
17 share?
18   A   Yes.
19   Q   Is that analysis in your report?
20   A   No.   09:24:35
21   Q   Is it excluded from your report because of
22 your understanding of Judge Alsup's orders?
23   A   That's correct.
24   Q   When you conducted an analysis using the
25 changes in market shares, did you get to the point   09:24:46

20

1 where you actually calculated a per unit royalty?   09:24:48
2   A   We may have.
3   Q   Did you get to the point where you
4 calculated a royalty as a percentage of Google
5 advertising revenues?   09:25:07
6   A   Yes.
7   Q   Under that analysis using the change in
8 market shares, what royalty rate did you calculate
9 as a percentage of Google advertising revenues?
10   A   I don't recall at this point.   09:25:23
11   Q   Was it greater than or less than the
12 royalty rate that you calculated using the group and
13 value approach?
14   A   Greater, but not a lot.
15   Q   Can you put any order of magnitude on "not   09:25:36
16 a lot"?
17   A   Well, I need to preface this by saying
18 that we did some preliminary work. It did not go
19 through the kind of vetting that the final report
20 has, so as long as it's understood that this is --   09:26:11
21 that we didn't complete the work because we were
22 instructed not to complete the work, it probably
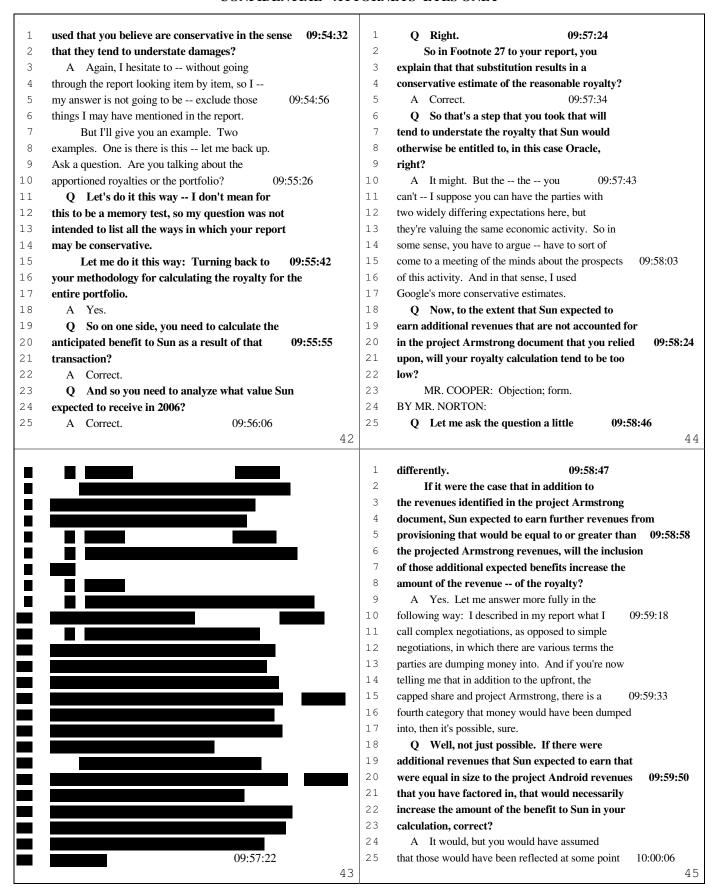23 would have been -- I don't know -- maybe twice as
24 high, in the 2 or 3 percent range, as opposed to
25 the under-2 percent range. It may have been as   09:26:25

21

Pages 18 to 21

1 much as 50 to 80 percent higher than the fairly   09:26:32
2 low royalties.
3   Q   Were there any other apportionment
4 analyses that you began to use, but stopped because
5 of orders by Judge Alsup?   09:26:49
6   A   We worked at estimating this the same
7 way -- we've sort of tracked the experts here,
8 which is my job. And so in Professor Cockburn's
9 first report -- or second report, sorry, not his
10 first report, but his second report.   09:27:11
11   Q   So you used the method --
12   You performed an analysis using the method
13 that Professor Cockburn used to apportion in his
14 September 2011 report?
15   A   Yeah, we explored that method, parts of   09:27:23
16 that method, sure.
17   Q   In exploring that method, did you reach a
18 conclusion as to what you believe the royalty rate
19 would be if that were a permissible method?
20   A   It would have been what I just told you   09:27:38
21 a few minutes ago. It would have been roughly
22 twice the current -- I need to be very cautious
23 here because I don't have the numbers in front of
24 me, and I didn't write the numbers down, but my
25 vague recollection is they would be roughly twice   09:27:48

22

1 the size of the current royalties, maybe not quite   09:27:49
2 that large.
3   Q   Now, with respect to the -- the change in
4 market share approach that you considered that you
5 did not include in your final report, did you reach 09:28:14
6 an opinion as an economist as to whether that
7 approach would be sound as a matter of economics?
8   A   It requires some additional work that I
9 think Professor Cockburn didn't do. The -- as I
10 understand, that approach was excluded by Judge   09:28:41
11 Alsup on an argument that when the predicted
12 willingness to pay was compared to the price, the
13 price of the phone was not allowed to move, that
14 this was Dr. Leonard's principal criticism. It's
15 my understanding that was at the heart of why   09:29:01
16 Judge Alsup excluded that.
17   It's hard to believe these phones' prices
18 would have gone down. Google didn't control the
19 price. So it is a reasonable assumption that the
20 price of the Android phones would not have changed, 09:29:18
21 and this would have been mostly a market share, a
22 functionality would have affected market share, but
23 that required some additional stable work by
24 Professor Cockburn, having to do with the Google's
25 relationships with the OEMs and how the OEMs price   09:29:35

23

1 their phones.   09:29:39
2   For example, you could imagine that the
3 way that Google could have offset the market share
4 effect would be to provide a subsidy to the phones
5 equal to the -- sort of the amount that they would   09:29:51
6 have lost because of the reduced functionality.
7 It's just unclear because if you think of these as
8 independent OEMs, and you think kind of a
9 competitive market here in which the handsets
10 themselves are priced at roughly equal to the cost   09:30:07
11 of the equipment and stuff in the handsets, then it
12 doesn't make a lot of sense to argue the adjudgment
13 would have been in the price.
14   Q   Okay.
15   So did you reach a conclusion as an   09:30:24
16 economist as to whether an approach using the change
17 in market shares would have been economically sound?
18   A   With the caveats I've just given, yes,
19 but it would have required a careful analysis
20 of -- of what would have happened as the   09:30:46
21 functionality of the phones decreased and what
22 part of that would have been reflected in market
23 share and what part of it would have been
24 reflected in perhaps the direct subsidy to Google.
25   I mean, Google presumably cares about   09:31:03

24

1 market share, but it also cares about its   09:31:05
2 advertising revenues on these phones. So if you
3 netted out a subsidy they had to pay, that would
4 have reduced their -- their -- their net revenues,
5 which would have mattered to them as well.   09:31:15
6   Let me put it a slightly different way.
7 Even if you don't have the same market share --
8 even if the market share doesn't change by the full
9 amount predicted by Professor Cockburn, it's
10 partially offset, but it's offset by subsidies to   09:31:31
11 Google. Then Google's revenues from the handsets
12 goes down, in part, because of the market share
13 and, in part, because it has to offset the problems
14 that the OEMs have in selling their phones. That
15 was not explored carefully by Professor Cockburn.   09:31:49
16 I did not explore it. So short of exploring that,
17 you know, there is not much that can be said there,
18 except that it was an appropriate methodology if
19 that hole could have been filled.
20   Q   All right. Thank you.   09:32:06
21   Now, with respect to the copyright
22 reasonable royalty, is there any difference in your
23 approach to calculating a reasonable royalty for
24 copyright and a reasonable royalty for patents?
25   A   No. And here I need to be very   09:32:24

25

1 cautious. I'm not a lawyer, obviously. It's my 09:32:26
2 understanding that there is not really a
3 reasonable royalty on a -- on copyrights. A
4 different term is used, but all of the experts in
5 this case have used a reasonable royalty approach 09:32:39
6 to deriving the -- the -- what would have been the
7 foregone revenues on the -- on the copyrights, and
8 I have adopted that approach.
9   Q   To the extent that --
10   To the extent that damages in a copyright 09:32:56
11 case can be measured by a hypothetical license that
12 would have been negotiated between the parties at
13 the time that infringement began, and to the extent
14 that in a patent case, damages could be calculated
15 by calculating a hypothetical license that would 09:33:14
16 have been negotiated by the parties at the time the
17 infringement began, is there any economic reason to
18 approach those two measurements any differently?
19   A   Yes. The patents have a known life.
20 And it's my understanding that the copyrights have 09:33:31
21 a known life, but it's much longer. I don't know
22 what the life is, but it's a much longer period of
23 time. So presumably, if you were able to think
24 about these negotiations as separate on the two
25 different forms of intellectual property, they 09:33:49
26

1 might take a slightly different character because 09:33:52
2 of the -- because of the lifetime, expected life
3 of that.
4   And, you know, you have invited me to
5 speculate a little bit here, so I will. It's 09:34:04
6 conceivable that the kind of noninfringing
7 substitutes could be different for patents than for
8 copyrights.
9   Q   Okay.
10   You're familiar with the Georgia Pacific 09:34:16
11 factors?
12   A   I am.
13   Q   All right.
14   In the two observations that you just made
15 that might be different between copyrights and 09:34:22
16 patents, would those potential differences be
17 addressed by application of the Georgia Pacific
18 factors?
19   A   I'm not quite sure how to answer. It's
20 my understanding the Georgia Pacific factors apply 09:34:39
21 to the reasonable royalty for patents and not for
22 copyrights, but I'm happy to be informed if I've
23 got that wrong.
24   Q   Well, is there --
25   Is application of the Georgia Pacific 09:34:57
27

1 factors to calculate a reasonable royalty in a 09:34:58
2 patent case, does that make good economic sense?
3   A   You're asking me to opine on the Georgia
4 Pacific factors?
5   Q   A good -- an economically sensible way to 09:35:10
6 calculate a royalty in a patent case?
7   A   Well, if you mean a -- a -- a
8 negotiation, a hypothetical negotiation, the
9 answer is in some cases yes, in some cases no.
10   I've opined in my report this makes sense 09:35:24
11 for a portfolio, doesn't really make sense for the
12 individual patents. But I think the Georgia
13 Pacific factors are -- don't have a lot of weight
14 among economists. I don't think this is -- this is
15 not the approach that an economist would take to 09:35:47
16 thinking about these matters. And you know, sort
17 of there is a constraint here that economists have
18 to pour themselves into. And so if you read these
19 reports, including the experts in this case, the
20 Georgia Pacific factors are a set of, we've got to 09:36:00
21 do this; let's just check off the list. They don't
22 seriously inform the analysis.
23   In defense of my report, I took them
24 seriously because they provided, as you know since
25 you have read it, a place to critique the experts, 09:36:21
28

1 which was part of my assignment. And so they 09:36:25
2 allowed me an opportunity to address specifically a
3 number of topics the experts brought on. In this
4 case they happened to be useful, but in lots of
5 cases they are not terribly useful. 09:36:38
6   Q   So is the approach that you used to
7 calculate a reasonable royalty for patents, is it
8 just as good a method for calculating the
9 hypothetical license for the copyrights in this
10 case? 09:36:49
11   MR. COOPER: From an economic point of
12 view?
13   MR. NORTON: From an economic point of
14 view, yes.
15   THE WITNESS: I think I've answered that 09:36:59
16 question. You know, if you had separate licenses
17 for patents and for copyrights, as opposed to a
18 portfolio of intellectual property, and had
19 negotiations that would inform you about how the
20 parties thought about those two separate things, 09:37:20
21 then I think in principle, given my earlier answer,
22 one could think about the negotiations as being
23 somewhat different between the two. But in this
24 case, we have a single negotiation over an aggregate
25 that includes both the patents and the copyrights, 09:37:34
29

1 as I understand the matter. And so in this   09:37:37
2 particular case, I don't think there is a useful way
3 of thinking about those two negotiations separately.
4 It was a single negotiation for the entire bundle
5 and, therefore, any reasonable hypothetical   09:37:53
6 negotiation has to think of it as a -- as a unified
7 bundle, if one's going to tie it to the actual
8 evidence in the case.
9 BY MR. NORTON:
10   Q   So turning now to your -- the method that   09:38:22
11 you applied for calculating a reasonable royalty,
12 and I'm looking at your report at paragraphs --
13 Paragraph 47, which is on Page 16 to 17. That's
14 paragraph 47, and the subnumbered paragraphs within
15 that.   09:38:51
16   That describes the method that you used to
17 calculate the reasonable royalty here for the entire
18 portfolio?
19   A   It does.
20   Q   In doing that, we've used the term   09:39:05
21 "starting point" in some of the reports to describe
22 the -- the -- that negotiation where the parties
23 were in 2006.
24   Are you familiar with the use of that term
25 in the reports?   09:39:21

30

1   A   I am.   09:39:23

09:39:52

09:40:23

31

09:41:37

32

09:43:00

33

Pages 30 to 33

CONFIDENTIAL - ATTORNEYS' EYES ONLY

4   Q   So when you use an irrevocable or
5   perpetual license in this case, if the license were   09:43:20
6   irrevocable as you treat it in your report, Google
7   would have the rights to the intellectual property
8   for as long as the intellectual property exists; is
9   that right?
10   A   Yes, I assume it's for the life of the   09:43:42
11   product, is what these contracts are about.
12   Q   But Google would also be required to pay
13   Sun for as long as it was exploiting that
14   intellectual property; is that also correct?
15   A   That's correct.   09:43:53
16   Q   If you are correct in your conclusion that
17   the license would be a perpetual one, you would
18   also, at the same time, conclude that Google would
19   continue to pay royalties into the future; is that
20   right?   09:44:13
21   A   Yes, that's correct.

44:26

34

5   Q   To the extent that there is a legal   09:44:42
6   requirement to calculate damages through the day of
7   trial, does that have any effect on your approach to
8   the structure of this license?
9   MR. COOPER: Objection; form.
10   THE WITNESS: No. My approach is to   09:45:00
11   estimate the royalty rate. That is the rate that
12   they would have agreed to in 2006, and so to the
13   date of trial it's applied to actual Google
14   revenues. And if asked about going forward by the
15   court, I would simply say you apply the same royalty   09:45:16
16   rate either as a running royalty, or if it's a lump
17   sum, that you have to get reasonable testimony about
18   the expectations of the parties going forward.
19   BY MR. NORTON:
20   Q   Now, in the 2006 negotiation, would the   09:45:32
21   parties have necessarily concluded that the
22   intellectual property in that bundle was both valid
23   and to be infringed by Google?
24   A   The actual or hypothetical?
25   Q   In the actual 2006 negotiations between   09:45:55

35
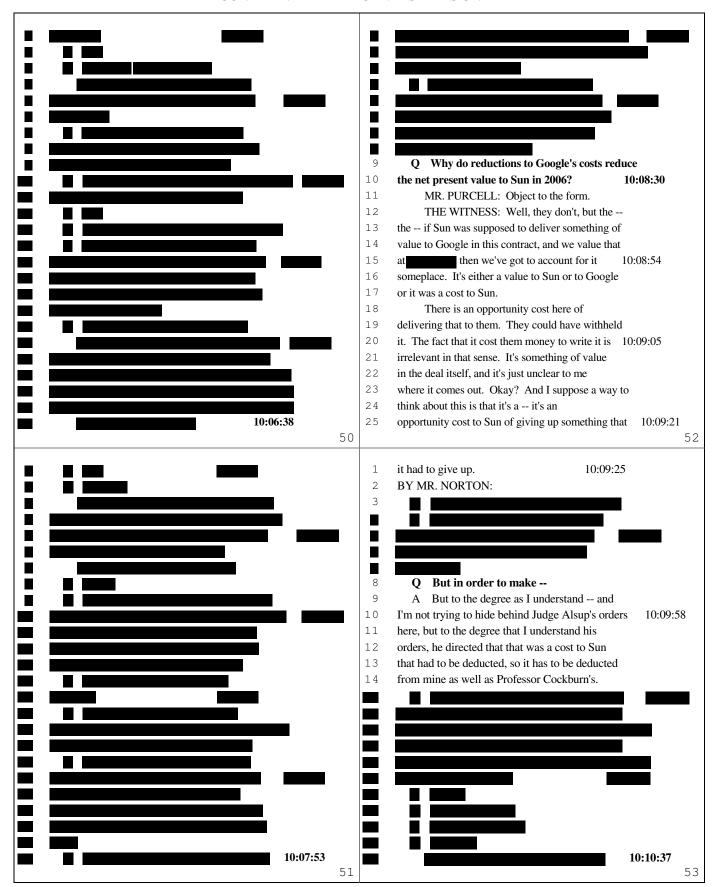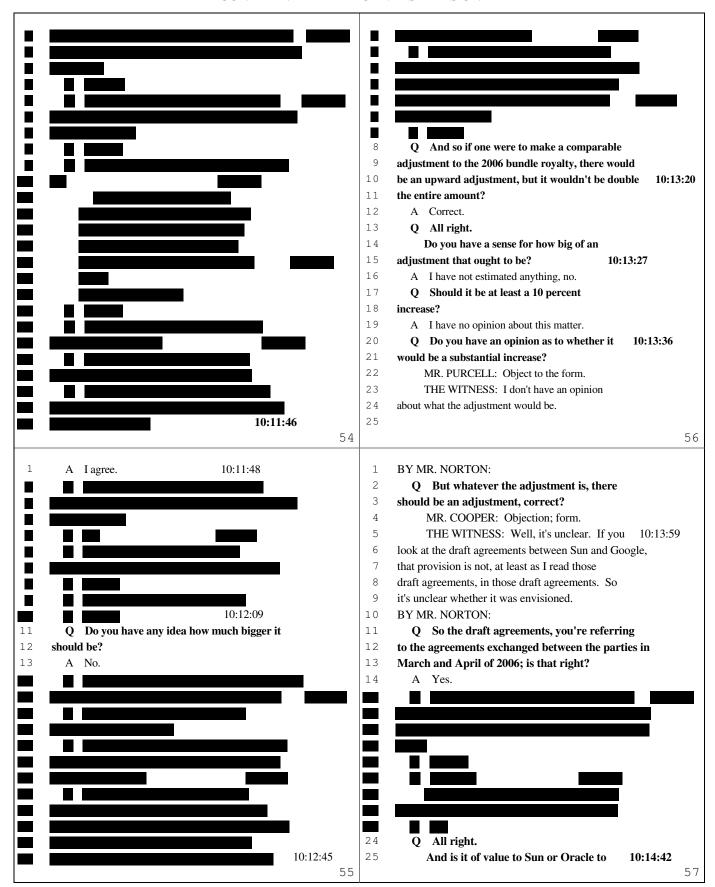
1   Google and Sun.   09:45:57
2   A   They would have individually had their
3   expectations about the validity and enforceability
4   of the intellectual property. And presumably,
5   that affects the license in that the party   09:46:12
6   licensing, Sun in this case, probably doesn't want
7   those challenged and would rather get the money.
8   And Google doesn't want to spend the time and
9   money to challenge. I assume that's why licenses
10   are taken. So -- so they would have -- they may   09:46:28
11   have had differing expectations, for all I know,
12   but they would not have assumed in those
13   negotiations that the intellectual property was
14   not valid or not enforceable.
15   Q   Are you familiar with the term "litigation   09:46:43
16   premium"?
17   A   I am.
18   Q   What is a litigation premium?
19   A   It's -- the litigation creates an
20   uncertain environment -- takes an uncertain   09:46:53
21   environment and creates certainty about certain
22   aspects of that environment, and that movement
23   from uncertainty to certainty has a dollar value.
24   That's the litigation premium.
25   Q   So prior to the litigation being brought   09:47:06

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1   and resolved, there is some uncertainty?   09:47:09
2   A   There is.
3   Q   And uncertainty about what?
4   A   Lots of things. That's a pretty broad
5   question.   09:47:23
6   Q   That's fair.
7   Uncertainty with respect to what that
8   bears on the litigation premium?
9   A   Well, that's also a broad question, and
10   I address this in the report. There is   09:47:34
11   uncertainty about which of the patents might be
12   needed. If you don't believe there is any
13   uncertainty about that, then the 2006 negotiation
14   was over these patents and the value of it is the
15   value of these patents.   09:47:52
16   So you've got sort of which -- which
17   course through this technology Google is actually
18   going to take. And then if it takes the course
19   through this technology, which patents end up being
20   and copyrights end up being infringed, and then   09:48:10
21   sort of the issue of the validity and the
22   enforceability of those patents and copyrights that
23   happened to have been infringed, all of that is not
24   known in 2006.
25   Q   So would the royalty that was negotiated   09:48:27

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Pages 34 to 37

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1   in 2006 reflect a discount because of the   09:48:31
2   uncertainty that existed at that time, in comparison
3   to the state of knowledge after the litigation?
4   A   It may have.
5   Q   And --   09:48:44
6   A   And as I've indicated in a number of
7   points in my report -- let me back up.
8   It's unclear what "conservative" means
9   into my role, so I'm not -- when I say
10   "conservative," I don't know who I'm supposed to be   09:48:58
11   conservative for, and I've tried not -- but the
12   approach in the end I took -- I took was to say,
13   this is a lower bound, and there are a number of
14   reasons why the actual royalty would be above the
15   number I put forward. It's not an upper bound.   09:49:16
16   So -- and I didn't necessarily try to bias it that
17   way, but it just turns out the way things fall, it
18   appears to be a lower bound, and it would be a
19   lower bound on this argument as well.
20   Q   So to the extent that there was   09:49:34
21   uncertainty with respect to validity and
22   infringement with respect to the IP in suit in 2006,
23   one would expect that after the litigation, if the
24   parties had a new negotiation, the royalty rate
25   would be higher than what you have calculated; is   09:49:52

38

1   that true?   09:49:54
2   A   Well, maybe. It's not altogether clear
3   which way this goes. I mean, Sun has uncertainty
4   about which of its patents and copyrights are
5   valid and enforceable, right? And Google has   09:50:07
6   uncertainty about sort of the cost of figuring
7   that out and discovering it. So it's unclear
8   which way that goes, frankly.
9   Q   But it is possible, if the parties were to
10   renegotiate a license after determination of   09:50:32
11   infringement and validity in this case with respect
12   to the patents and copyrights in suit, that they
13   would negotiate for a higher royalty rate than the
14   one you have calculated?
15   MR. COOPER: Objection; form.   09:50:45
16   THE WITNESS: That's possible, but I want
17   to emphasize again the point I just made, which is
18   Google may have been willing to pay a small premium
19   in order to -- for the -- for the portfolio, in
20   order to avoid the litigation that could come if it   09:51:07
21   subsequently infringed.
22   So there is -- the uncertainty here cuts a
23   couple of different ways. I don't think it cuts
24   uniformly one way. I am aware, however, I think
25   there is empirical evidence that there is a positive   09:51:23

39

1   litigation premium.   09:51:28
2   BY MR. NORTON:
3   Q   I'm sorry.
4   When you say, "there is empirical evidence
5   that there is a positive litigation premium," are   09:51:34
6   you talking about this case?
7   A   No, not this case. I'm just talking
8   about the economists who studied this matter have
9   found that there is a positive litigation premium.
10   Q   And so in general, one expects there to be   09:51:47
11   a litigation premium?
12   A   Yes, based on that empirical work.
13   Q   And that empirical work is focused on the
14   issue of uncertainty with respect to validity and
15   infringement; is that right?   09:52:01
16   A   I think so. I'd have to go back and
17   look at the study. I just know there is this
18   premium that we're talking about.
19   Q   I'm sorry.
20   Now, you have used the term "conservative"   09:52:10
21   in a number of places in your report to describe
22   your methods and conclusions; is that right?
23   A   Yes.
24   Q   When you use the term "conservative" in
25   your report, by that, you mean that you have   09:52:19

40

1   calculated damages that are lower than what might   09:52:22
2   be -- lower than what would be the case if you had
3   perfect information?
4   A   For the most part, yes.
5   Q   Is there any example where you have used   09:52:34
6   the term "conservative" to describe a methodology or
7   conclusion you have reached that might be too high?
8   A   Not that comes readily to mind, but
9   there may be. I don't recall. I think, in
10   general, the estimates I have, you would expect   09:52:51
11   the adjustments to go the other -- go up.
12   Q   And so given that, wouldn't it be the case
13   that if the parties were to renegotiate the license
14   after a finding of infringement and validity, that
15   the royalty that they would negotiate would be   09:53:14
16   higher than the one you have calculated?
17   A   Well, that goes to an issue that really
18   starts with Professor Cockburn a long time ago
19   about whether or not the Sun Armstrong project
20   expected revenues are a way of thinking about --   09:53:40
21   about that issue. And if they are, the answer is
22   the royalty that I estimated, for the most part,
23   incorporates that.
24   Q   Other than the measure of the anticipated
25   Armstrong revenues, are there approaches you have   09:54:23

41

Pages 38 to 41

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1 used that you believe are conservative in the sense   09:54:32
2 that they tend to understate damages?
3   A   Again, I hesitate to -- without going
4 through the report looking item by item, so I --
5 my answer is not going to be -- exclude those   09:54:56
6 things I may have mentioned in the report.
7   But I'll give you an example. Two
8 examples. One is there is this -- let me back up.
9 Ask a question. Are you talking about the
10 apportioned royalties or the portfolio?   09:55:26
11   Q   Let's do it this way -- I don't mean for
12 this to be a memory test, so my question was not
13 intended to list all the ways in which your report
14 may be conservative.
15   Let me do it this way: Turning back to   09:55:42
16 your methodology for calculating the royalty for the
17 entire portfolio.
18   A   Yes.
19   Q   So on one side, you need to calculate the
20 anticipated benefit to Sun as a result of that   09:55:55
21 transaction?
22   A   Correct.
23   Q   And so you need to analyze what value Sun
24 expected to receive in 2006?
25   A   Correct.   09:56:06

42

1   Q   Right.   09:57:24
2   So in Footnote 27 to your report, you
3 explain that that substitution results in a
4 conservative estimate of the reasonable royalty?
5   A   Correct.   09:57:34
6   Q   So that's a step that you took that will
7 tend to understate the royalty that Sun would
8 otherwise be entitled to, in this case Oracle,
9 right?
10   A   It might. But the -- the -- you   09:57:43
11 can't -- I suppose you can have the parties with
12 two widely differing expectations here, but
13 they're valuing the same economic activity. So in
14 some sense, you have to argue -- have to sort of
15 come to a meeting of the minds about the prospects   09:58:03
16 of this activity. And in that sense, I used
17 Google's more conservative estimates.
18   Q   Now, to the extent that Sun expected to
19 earn additional revenues that are not accounted for
20 in the project Armstrong document that you relied   09:58:24
21 upon, will your royalty calculation tend to be too
22 low?
23   MR. COOPER: Objection; form.
24 BY MR. NORTON:
25   Q   Let me ask the question a little   09:58:46

44

09:57:22

43

1 differently.   09:58:47
2   If it were the case that in addition to
3 the revenues identified in the project Armstrong
4 document, Sun expected to earn further revenues from
5 provisioning that would be equal to or greater than   09:58:58
6 the projected Armstrong revenues, will the inclusion
7 of those additional expected benefits increase the
8 amount of the revenue -- of the royalty?
9   A   Yes. Let me answer more fully in the
10 following way: I described in my report what I   09:59:18
11 call complex negotiations, as opposed to simple
12 negotiations, in which there are various terms the
13 parties are dumping money into. And if you're now
14 telling me that in addition to the upfront, the
15 capped share and project Armstrong, there is a   09:59:33
16 fourth category that money would have been dumped
17 into, then it's possible, sure.
18   Q   Well, not just possible. If there were
19 additional revenues that Sun expected to earn that
20 were equal in size to the project Android revenues   09:59:50
21 that you have factored in, that would necessarily
22 increase the amount of the benefit to Sun in your
23 calculation, correct?
24   A   It would, but you would have assumed
25 that those would have been reflected at some point   10:00:06

45

Pages 42 to 45

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1   in the negotiation documents. And at least so far   10:00:07
2   as I know, there is nothing like that reflected.
3   There is certainly no hard numbers here.
4   Q   Okay.
5   But to the extent --   10:00:16
6   I didn't mean to cut you off. Were you
7   finished with your answer?
8   A   Yeah.
9   Q   But to the extent that there is evidence
10 that Sun did have such expectations and that they   10:00:25
11 were quantified in some sense, to accurately
12 calculate the royalty using your method, you should
13 include the net present value of 2006 of those
14 additional benefits; is that right?
15   A   Yes, if there is clear evidence that   10:00:40
16 these were part of the way Sun viewed the value of
17 its intellectual property. And the way I've
18 characterized the complex contract is that Sun had
19 in mind a value for which it was willing to
20 license open source -- open source license of its   10:00:57
21 intellectual property and that it intended to
22 monetize that in three different ways. So if
23 you're telling me there is other things out here,
24 well, Sun had other business activities. It was
25 doing lots of things. You can't throw that in   10:01:12

46

1   here. So you'd have to tie this to Sun's ex ante   10:01:14
2   evaluation of the intellectual property that was
3   at the heart of this negotiation.
4   If your question is, there is a tie that
5   shows there is a fourth bundle here, and it was   10:01:28
6   part of what Sun thought of as the value of its
7   intellectual property, then yes.
8   Q   Okay.
9   Let me ask a somewhat more precise
10 question.

The   10:02:22

47

1   point is that this is the net revenue, and you   10:02:25
2   would have to net out whatever costs. So it's
3   conceivable you could have a high revenue
4   activity, but not much contribution to the value
5   of the intellectual property they thought they   10:02:38
6   were negotiating over.
7   Q   Sure, because what you're actually
8   calculating is the net present value of 2006 of the
9   expected profits, not revenues?
10   A   Correct.   10:02:49
11   Q   Okay.
12   And so the salient question would be, were
13 there additional profits that Sun expected to earn
14 directly from its monetization of Android?
15   A   Yes. And that envisioned, as part of   10:03:04
16 the compensation, for the bundle of intellectual
17 property in 2006.
18   Q   Now, you also make adjustments to the
19 value to Sun by looking at some of the other terms
20 that the parties discussed in 2006; is that right?   10:03:34
21   A   You need to be more precise.
22   Q   Sure. Okay.
23   So one of the things that you look at
24 is --
25   And just so we're in the same place, if   10:03:43

48

1   you'd turn to Paragraph 73.   10:03:48
2

10:05:20

49

Pages 46 to 49

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10:06:38

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10:07:53

51

9   Q   Why do reductions to Google's costs reduce
10   the net present value to Sun in 2006?   10:08:30
11   MR. PURCELL: Object to the form.
12   THE WITNESS: Well, they don't, but the --
13   the -- if Sun was supposed to deliver something of
14   value to Google in this contract, and we value that
15   at   then we've got to account for it   10:08:54
16   someplace. It's either a value to Sun or to Google
17   or it was a cost to Sun.
18   There is an opportunity cost here of
19   delivering that to them. They could have withheld
20   it. The fact that it cost them money to write it is   10:09:05
21   irrelevant in that sense. It's something of value
22   in the deal itself, and it's just unclear to me
23   where it comes out. Okay? And I suppose a way to
24   think about this is that it's a -- it's an
25   opportunity cost to Sun of giving up something that   10:09:21

52

1   it had to give up.   10:09:25
2   BY MR. NORTON:
3

8   Q   But in order to make --
9   A   But to the degree as I understand -- and
10   I'm not trying to hide behind Judge Alsup's orders   10:09:58
11   here, but to the degree that I understand his
12   orders, he directed that that was a cost to Sun
13   that had to be deducted, so it has to be deducted
14   from mine as well as Professor Cockburn's.

10:10:37

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Pages 50 to 53

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Page 54

10:11:46

Page 55

1   A   I agree.   10:11:48

10:12:09

11   Q   Do you have any idea how much bigger it
12 should be?
13   A   No.

10:12:45

Page 56

8   Q   And so if one were to make a comparable
9 adjustment to the 2006 bundle royalty, there would
10 be an upward adjustment, but it wouldn't be double   10:13:20
11 the entire amount?
12   A   Correct.
13   Q   All right.
14   Do you have a sense for how big of an
15 adjustment that ought to be?   10:13:27
16   A   I have not estimated anything, no.
17   Q   Should it be at least a 10 percent
18 increase?
19   A   I have no opinion about this matter.
20   Q   Do you have an opinion as to whether it   10:13:36
21 would be a substantial increase?
22   MR. PURCELL: Object to the form.
23   THE WITNESS: I don't have an opinion
24 about what the adjustment would be.
25

Page 57

1 BY MR. NORTON:
2   Q   But whatever the adjustment is, there
3 should be an adjustment, correct?
4   MR. COOPER: Objection; form.
5   THE WITNESS: Well, it's unclear. If you   10:13:59
6 look at the draft agreements between Sun and Google,
7 that provision is not, at least as I read those
8 draft agreements, in those draft agreements. So
9 it's unclear whether it was envisioned.
10 BY MR. NORTON:
11   Q   So the draft agreements, you're referring
12 to the agreements exchanged between the parties in
13 March and April of 2006; is that right?
14   A   Yes.

24   Q   All right.
25   And is it of value to Sun or Oracle to   10:14:42

Pages 54 to 57

1   have Google promoting the Java brand in the mobile   10:14:46
2   space?
3   A   Probably.
4   Q   In connection with Android?
5   A   Probably.   10:14:51
6   Q   Is there any way in which it would not be
7   to the benefit of Sun to have Google promoting Java
8   in the mobile space?
9   MR. COOPER: Objection; form.
10   BY MR. NORTON:
11   Q   You said "probably," and I'm trying to
12   figure out what makes it something less than
13   certain.
14   A   Do you want me to speculate? Is this an
15   invitation to speculate?   10:15:22
16   Q   No. Is there a specific reason, that you
17   can think of, as to why it would not be valuable to
18   Sun to have Google promoting Android as Java?
19   MR. COOPER: Same objection; form.
20   THE WITNESS: This is really speculation,   10:16:02
21   but to the degree that project Armstrong was not
22   successful and that Sun did not gain -- or it's
23   getting most of its monetization of this
24   intellectual property -- so suppose going forward
25   it's not successful, then Sun may very well have   10:16:18

                                                          58

1   been interested in an alternative or competitive   10:16:25
2   product, in which case, it's not of interest to have
3   your competitors saying, "I'm just like the product
4   that just came on the market."
5   BY MR. NORTON:
6   Q   And all the evidence that you have seen
7   suggests that Sun expected Project Armstrong to be
8   successful?
9   A   Yes.
10   Q   Okay.   10:16:42
11   So at the time of the 2006 negotiation,
12   Sun would have expected that Google's promotion of
13   Java in the mobile space in connection with Android
14   would be valuable to Sun?
15   A   I think so, yes.   10:16:52
16   Q   And would you agree that Sun would have
17   expected that Google's promotion of Java in the
18   mobile space in connection with Android would be
19   very valuable?
20   MR. COOPER: Objection; form.   10:17:04
21   MR. PURCELL: Join.
22   THE WITNESS: I don't know.
23   BY MR. NORTON:
24   Q   So when you have to bring the future
25   revenues back to net present value of 2006, you use   10:17:18

                                                          59

1   a discount rate?   10:17:21
2   A   I do.
3   Q   And the discount rate that you used was
4   15 percent?
5   A   Yes.   10:17:25
6   ███ ████
7   ██   █████████████████
8   ██   ██████████████████████
9   ██   ██████████████
10   ██   ██ █████   10:17:33
11   Q   All right.
12   What is the reason to use a discount rate
13   in the first place?
14   A   Because the future is uncertain.
15   Q   All right.   10:17:41
16   A   And money is costly.
17   ██   ███████████████████
18   ██   ██ ██████████████████
19   ██   ████
20   ██   ██ █████████████   █████
21   ██   ████
22   Q   The fixed fee payments come over a
23   three-year period?
24   A   Correct.
25   Q   You characterize those as low risk; is   10:18:06

                                                          60

1   that right?   10:18:07
2   A   Correct.
3   Q   Are they lower risk than the future
4   revenues?
5   A   Yes.   10:18:15
6   Q   Is it appropriate to apply the same
7   discount rate for the relatively low-risk fixed
8   payments as it is for the future revenues?
9   A   I think so. I think you want to use a
10   project-specific discount rate. You're arguing   10:18:25
11   for a subproject-specific discount rate. One
12   could do that, but I think typically a firm or a
13   venture capitalist or whomever is doing this
14   doesn't split the project into particular parts.
15   They just use a discount rate. And the discount   10:18:42
16   rate, overall, reflects the relative risks in
17   this, so you could argue to the degree that the
18   15 percent -- well, you could argue that the
19   15 percent, in some sense, aggregates these risks
20   and reflects those.   10:18:56
21   Let me put it slightly differently. ██
22   ██████████████████████████████████
23   at, let's say, the money market rate or something
24   like this because they're certain, then I think,
25   you know, one might argue that the Project   10:19:09

                                                          61

1 Armstrong monies have to be discounted at a   10:19:10
2 substantially higher interest rate because they are
3 more -- far more speculative and 15 percent is too
4 low.
5   Q   So in a sense, the 15 percent discount   10:19:21
6 rate is a -- is right for the whole project?
7   A   It is. That's how we've treated it.
8   Q   Now, the 15 percent discount rate itself
9 is another number that you characterize as
10 conservative; is that right?   10:19:33
11   A   Correct.
12   Q   And again, it's conservative in the sense
13 that it is a larger discount factor, discount rate,
14 than might reasonably apply?
15   A   Well, this goes to an issue about --   10:19:46
16 that economists struggle with some on damages.
17 You can get the rate of return, the cost of
18 capital, essentially, for firms that look like Sun
19 and Google. And I think, actually, Professor --
20 or Dr. Cox does that, and it's 11-point something   10:20:05
21 percent.
22   And then the question is, is a specific
23 project more or less risky than the average risk of
24 the firm's because that's the way the market values
25 the firm as a whole. What you'd like to have, and   10:20:19

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1 the theoretically appropriate thing, is to have   10:20:22
2 the -- the interest rate that reflects the risk of
3 the project, not the risk of the firm. We don't
4 have that, and typically you don't have that. So
5 it's conservative in the sense that it's above the   10:20:37
6 average user cost of capital for firms that look
7 like Sun, but it may not be conservative relative
8 to the risks of specific projects. I just don't
9 have information on that.
10   Q   All right.   10:20:54
11   But in Footnote 28 to your report, you
12 state that:
13   "I conclude use of the
14   15 percent discount rate is
15   conservative in this instance"?   10:21:02
16   A   That's correct, because typically damage
17 experts are left to use the average, not the
18 project specific. And we know the average for the
19 group of firms in that industrial classification
20 is, what, 11 something, 11.8 percent. So in that   10:21:19
21 sense, it's conservative. That's all I meant.
22   Q   So in your report, you note that the
23 discount rate for 6 code 737, which includes both
24 Sun and Google, was 11.77 percent?
25   A   Yes.   10:21:38

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1   Q   And your use of 15 percent instead of   10:21:39
2 11.77 percent is conservative, correct?
3   A   Correct.
4   Q   And conservative, again, in the sense that
5 had you used 11.77 percent, the royalty damages   10:21:46
6 would be great?
7   A   Agreed.
8   Q   To the extent that -- well, let me strike
9 that.
10   So one part of the equation is to figure   10:22:17
11 out what Sun's expected benefits are, expected
12 profits are, and discount them back to net present
13 value, correct?
14   A   Correct.
15   Q   And then the second part of the equation   10:22:27
16 is to determine what Google's expected profits are
17 and discount those back to net present value?
18   A   Correct.
19   Q   Now, in calculating Google's anticipated
20 benefits, what benefits did you consider?   10:22:39
21   (Whereupon, Allyson Franco with
22   Farella Braun & Martel, just
23   entered the conference room.)
24   THE WITNESS: I make the argument early in
25 the report that the parties would have agreed to a 10:22:52

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1 license on Google's Android revenues on the   10:22:54
2 argument, a monitoring argument, that you don't want
3 to have things that are difficult to measure, so we
4 just look at Google's Android revenues.
5   MR. COOPER: Let the record show that   10:23:07
6 Allyson Franco from our firm has joined the
7 deposition.
8   MR. NORTON: Thank you.
9 BY MR. NORTON:
10   Q   Does it make any difference in your   10:23:15
11 calculation whether Google expected other
12 substantial benefits from watching Android?
13   A   I'm not certain I know what you have in
14 mind, so you need to be more specific about that.
15   Q   Okay.   10:23:55
16   In your review of the evidence, have you
17 seen any evidence that Google expected Android to
18 provide benefits to its Desktop search business?
19   A   Not really. There are vague allusions
20 to this, but I haven't seen, quote, evidence.   10:24:28
21   Q   To the extent that Google expected that
22 Android would provide benefits to its Desktop search
23 business, are those benefits factored into your
24 royalty analysis?
25   A   Yes, in a sense they are. One of the   10:24:56

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1 points that I make in the -- in the report, and   10:24:59
2 it's an important point, is that the expectations
3 that the parties held in 2006 are reflected in the
4 offer, they're baked into the offer. ███████

███████████████████████████████ ███████
███████████████████████████████
███████████████████████████
███████████████████████████
███████████████████████ ███████
███████████████████████
███████████████████████
███████
14 ███████████████████ They may
   have come from lots of different sources, but
15 they're there. They were part of the negotiation.   10:25:48
16   Q   In calculating a royalty rate -- strike
17 that.
18   So if, in fact, Google expected that as a
19 result of launching Android with Sun's Java
20 technology, Google would earn additional benefits   10:26:17
21 above and beyond advertising revenues that would
22 double the value of Android to Google, your royalty
23 analysis would be unchanged?
24   A   Yes. To the degree those expectations
25 were held by Google when they negotiated it,   10:26:37

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1 they're reflected in Google's willingness to pay   10:26:39
2 whatever it agreed to pay in the 2006 contract.
3   MR. PURCELL: Object to form.
4 ███████████████████████

███████████████████████████ ███████████
███████████████████████
███████████████
8 BY MR. NORTON:
9   Q   Now, by using that 2006 negotiation as a
10 starting point, is it correct to say that to the   10:27:09
11 extent that Java was already fragmented in 2006,
12 that that existing fragmentation is also already
13 factored into -- baked into the negotiations between
14 the parties at that time?
15   A   Yes, as is any fragmentation that may   10:27:37
16 come from open sourcing.
17   Q   As is any fragmentation that may come from
18 open sourcing that is compatible, correct?
19   A   Correct. Presumably the fragmentation
20 that may have occurred before was fragmentation   10:27:54
21 within compatible implementations, assuming that
22 Sun protected its intellectual property. So we
23 have a compatible implementation post 2006. And
24 whatever was occurring with regard to
25 fragmentation would have been expected to have   10:28:12

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1 continued.   10:28:15
2   Q   That's an assumption?
3   A   Sure. But it's always an assumption in
4 contracts that the parties are well informed about
5 their histories and understand and have   10:28:33
6 expectations based on both their histories and
7 looking forward, and that those expectations are
8 built into their offers and counteroffers in the
9 deal.
10   Q   Just so we're clear, to the extent that   10:28:48
11 there was fragmentation already in existence --
12 strike that.
13   To the extent that there was fragmentation
14 of Java that had already occurred as of the spring
15 of 2006, that fragmentation is already baked into   10:28:59
16 the negotiations between the parties in 2006,
17 correct?
18   A   Correct. But my answer was a bit --
19 little bit different than that.
20   Q   I want to do it in pieces.   10:29:12
21   A   Okay.
22   Q   All right.
23   And then to the extent that an agreement
24 between Sun and Google, consistent with the terms
25 that they were discussing in 2006, to open source   10:29:24

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1 Java would have caused some additional   10:29:27
2 fragmentation, that's your opinion that is also
3 baked into the value?
4   A   Correct.
5   Q   To the extent that Sun expected that the   10:29:35
6 deal with Google would slow fragmentation, that
7 would have been a benefit that Sun would expect from
8 this that you have not factored into the analysis,
9 correct?
10   A   No. That would have been factored into   10:29:52
11 their expectations.
12   Q   To the extent that actual infringing --
13   To the extent that the actual use of the
14 Java technology by Google is infringing and has
15 caused fragmentation that is greater than Sun would 10:30:07
16 have expected from the 2006 deal, that is not
17 accounted for in your reasonable royalty, correct?
18   A   That's correct. And I have indicated in
19 several places that this doesn't account for --
20 fully account for an upward adjustment for   10:30:20
21 fragmentation.
22   Q   And to the extent that Sun would have --
23   A   Fragmentation from a noncompatible
24 implementation, as opposed to fragmentation
25 from -- that may have occurred because of a   10:30:30

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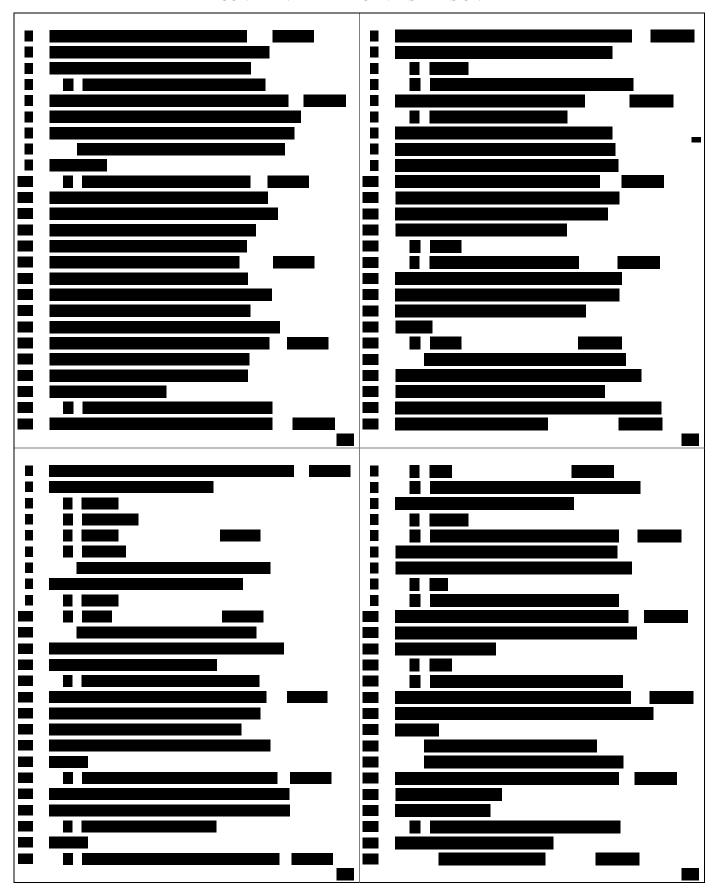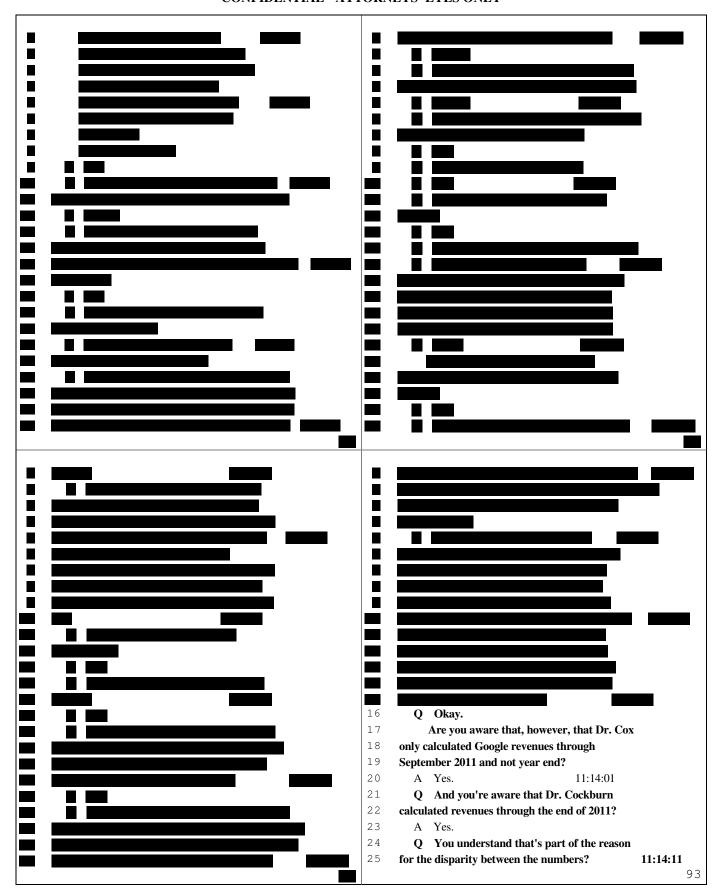**Veritext National Deposition & Litigation Services**
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1   compatible implementation.   10:30:33
2   Q   So when we look at the hypothetical
3   negotiation, imagine the parties negotiating for the
4   infringement that Google actually did, do you agree
5   that Sun would have expected some additional   10:30:49
6   compensation to account for the risk of increased
7   fragmentation from an incompatible implementation?
8   A   Yes.
9   Q   And that additional compensation that Sun
10 would have expected is not included in your royalty   10:31:09
11 calculations; is that right?
12   A   Correct.
13   Q   Now, in addition to the issue of
14 fragmentation, by using the 2006 starting point, is
15 it correct to say that the -- strike that. I'm   10:31:28
16 sorry.
17   Is it fair to say that by using the 2006
18 starting point, the consideration of alternatives is
19 already baked into the numbers?
20   A   Yes, I say that explicitly in my report.   10:31:48
21   Q   When you say "explicitly," is that
22 Paragraphs 177 to 179 of your report?
23   A   Yes. But in addition, there are a
24 couple of footnotes.
25   Q   I hate to do this to you, but can you   10:32:12

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1   direct me to those?   10:32:14
2   A   Sure. One in verse -- paragraph --
3   Q   Some of us write in poetry. Some of us
4   write in prose.
5   A   Yes. Paragraph 76, Footnote 38, this is   10:32:29
6   talking about Sun, but it's equally true about
7   Google.
8   Q   So in Footnote 38 -- let me catch up to
9   you.
10   In Footnote 38, you're referring to   10:32:58
11 Paragraph 76. You say:
12   "This is another example of a
13   point I made earlier: What Sun
14   knew in 2006 about its Java ME
15   business and Sun's expectations   10:33:09
16   with regard to the effects of an
17   agreement with Google for an
18   open-source Java-VM Android on its
19   Java ME business would be fully
20   reflected in its 2006 offer."   10:33:21
21   And you say that's equally true of Google.
22 Can you explain what you mean?
23   A   The expectations that the parties held
24 about what would happen going forward are
25 reflected in the agreements that they would have   10:33:32

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1   made in 2006.   10:33:35
2   Q   Okay.
3   And so to the extent that there were
4   alternatives available to Google in 2006, the
5   economic effect of those alternatives is already   10:33:45
6   baked into the bargain the parties would have struck
7   at that time?
8   A   Yes.
9   Q   And if that's correct, then there should
10 be no need to make any adjustment to the portfolio   10:33:55
11 royalty based on arguments that there are
12 alternatives; is that right?
13   A   That's my opinion.
14   Q   So if we could turn to Paragraph 86.
15   Now, in paragraph 86 here in your report,   10:35:06
16 you describe, if I understand correctly, the step
17 where you convert the expected value to Google and
18 expected value to Sun into an effective report for
19 the entire portfolio; is that right?
20   A   Correct.   10:35:24
21   Q   Now, at the beginning of the deposition
22 you explained that there is a change that you would
23 make to the calculation here that would slightly
24 decrease the denominator of the equation.
25   A   Yes.   10:35:41

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1   Q   All right.   10:35:41
2   And do you have a calculation as to what
3   the percentage royalty would be after you make that
4   correction?
5   A   This affects it as second decimal place   10:35:50
6   or the first decimal place. It's a teeny effect.

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Pages 70 to 73

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19 Q   And that's true of the 2006 negotiation,
20 right?   10:38:05
21   A   Yes, because we're trying to convert it
22 into a royalty that Sun would have accepted in
23 lieu of its opportunity to monetize through
24 Project Armstrong and the other payments that were
25 being made.   10:38:18

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1   Q   Right.   10:38:18
2   Now, the Google's actual infringement,
3   however, denied Sun the opportunity to earn that
4   money from Project Armstrong, correct?
5   MR. PURCELL: Object to the form.   10:38:30
6   THE WITNESS: Right, but that's why we're
7   estimating a royalty here that they would have
8   accepted in lieu of having that opportunity.
9   BY MR. NORTON:
10   Q   Right.   10:38:39

19 Q   So Sun expected to get the Project
20 Armstrong --   10:39:05
21   A   So Sun -- Google wasn't paying Sun a
22 for-certain amount equal to the Project Armstrong.
23 This was fully Sun's risks. It undertook a
24 business project, and there were these risks, so
25 you should net that out. But it certainly 10:39:18

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1   reflects the aggregate value of the two parties'   10:39:20
2   expectations of what this intellectual property
3   was worth in 2006.
4   Q   Is there a difference between the two
5   parties' expectation of what the aggregate value of   10:39:33
6   this project was in 2006, and what that value
7   actually turned out to be in real life?
8   A   I'm sure there is.
9   Q   Is one of the ways in which it's different
10 is that Sun did not get the opportunity to monetize   10:39:45
11 Android through Project Armstrong?
12   A   Correct.

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16   Q   Okay.

17   Are you aware that, however, that Dr. Cox

18   only calculated Google revenues through

19   September 2011 and not year end?

20   A   Yes.   11:14:01

21   Q   And you're aware that Dr. Cockburn

22   calculated revenues through the end of 2011?

23   A   Yes.

24   Q   You understand that's part of the reason

25   for the disparity between the numbers?   11:14:11

                                                        93

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1   A   It may very well be, sure.   11:14:14
2   Q   For purposes of your calculations in your
3 report, you have used the numbers from Dr. Cox's
4 report?
5   A   Correct.   11:14:19
6   Q   And to the extent that revenues as of the
7 date of trial are greater than they were calculated
8 by Dr. Cox back in September, that would increase
9 the royalty -- well, increased the damages number?
10   A   Sure. I think I've been clear, but if I   11:14:35
11 haven't been clear, what I'm putting forth is a
12 methodology that if asked to testify, I would
13 instruct the jury about -- or not instruct, but
14 testify to, and the jury would then multiply this
15 number, times the actual revenues that had come   11:14:49
16 into evidence in some other way. So the numbers
17 here for damages, the dollar numbers are
18 illustrative. They are not my opinion of what
19 damages actually are.
20   Q   And when you calculate --   11:15:04
21   The revenues that you consider for
22 purposes of your royalty calculation are limited to
23 the United States; is that correct?
24   A   Yes.
25   Q   You only use advertising revenue and not   11:15:17

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1 Android market revenue or direct sales of handsets?   11:15:20
2   A   I think it's just advertising revenue.
3   Q   Is there a reason why you did not consider
4 Android market revenue in your calculation of
5 damages on the royalty?   11:15:31
6   A   There is interesting literature in
7 economics about monitoring, and the argument
8 essentially is that parties will agree in
9 contracts typically to things that are easy to
10 monitor; that is, that have -- where they can have   11:15:51
11 external verification. And so I make the argument
12 that the parties would have agreed to a royalty on
13 revenues, on Android's advertising revenues, okay,
14 because they are a direct measure of the benefit
15 of having the Android operating system on the   11:16:13
16 phones. To the degree there are convoyed sales or
17 other kinds of things that are difficult to
18 monitor, I don't believe they would be in the
19 royalty base.
20   Q   So you characterize --   11:16:29
21   For this purpose, are you characterizing
22 revenues from the Android market as convoyed sales?
23   A   Yeah. If you mean by the Android
24 market, the sales of apps?
25   Q   I do.   11:16:41

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1   A   Yes.   11:16:43
2   Q   And same for direct sales of the Nexus
3 handset?
4   A   Yes. Although it's unclear how to treat
5 that to the degree that's not a particularly large   11:16:53
6 part of this business, as I understand, so it's
7 not going to matter very much.
8   Q   Actually, would you look at your Table 9?
9   A   Sure.
10   Q   On Table 9, you're using Dr. Cox's   11:17:18
11 numbers; is that right?
12   A   Yes.

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18   Q   That is your best economic advice?

19   A   Yes.

20   Q   It would be fair to say that's your best   11:25:09

21 economic judgment?

22   A   Yes.

23   Q   So is it correct to say that your best

24 economic judgment is that the value of the in-suit

25 IP in this case is the value of the Java ME   11:25:19

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1 agreement for that bundle of intellectual   11:26:37

2 property.

3   If you assume that Google did not know in

4 2006 what it needed, then you can think about this

5 in a couple of different ways. One, you can think   11:26:50

6 of it as -- as an option to use some, all or none

7 of the intellectual property, and what's the option

8 value for being able to choose both what you want

9 to use and the timing in which you use it. And the

10 option value, I think, would be the portfolio   11:27:10

11 value. That's what portfolio licenses are,

12 essentially, in this setting.

13   A third way to think about it is, suppose

14 that Google didn't really want to use Java ME

15 directly, but wanted to use a Java Virtual Machine   11:27:26

16 and write in Java so that applications and OEMs

17 would be attracted to the platform because they

18 thought Java was necessary. So they are going to

19 go out and write their own thing. But they

20 understood, or would understand, I think   11:27:43

21 reasonably, that Sun, that had done this for many,

22 many years, had bumped into the problems that it

23 would encounter as it -- as it went out and did its

24 own Java Virtual Machine. And as it solved those

25 problems, it was likely to solve them in the same   11:28:02

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1 portfolio from 2006?   11:25:25

2   A   Yes. I'm quibbling about this only

3 because, as I suggest in the previous paragraphs,

4 paragraphs running up to this paragraph, there are

5 several ways to think about this. And in my   11:25:40

6 economic opinion, there would have been a

7 portfolio negotiation. All right? And therefore,

8 if some subset of the portfolio is infringed, the

9 value is the portfolio value.

10   Q   Okay.   11:25:57

11   A   But I don't mean -- the way you frame it

12 suggests that I've apportioned this to those, and

13 that's not quite what I've done.

14   Q   Okay.

15   I know this isn't in the report, but why   11:26:09

16 don't you explain what it is that you have done in

17 reaching the conclusions that you express in Section

18 K?

19   A   Three different things, three or four

20 different things. First, if you think of the   11:26:21

21 hypothetical negotiation as the parties knowing in

22 2006 what intellectual property they needed,

23 Google knew what it needed, it needed these two

24 patents and it needed the 37 copyrights, then

25 whatever the agreement was in 2006 was the   11:26:35

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1 way that Sun had solved them and, hence, crossed   11:28:04

2 the boundaries of a Sun patent. So in that sense,

3 you can think of the portfolio license as an

4 insurance against subsequent litigation if you

5 happened to have crossed a boundary when you, in   11:28:20

6 fact, were doing your own thing here.

7   Q   So in each of those three scenarios,

8 Google knows exactly what it wants. Google doesn't

9 know what it wants. Google is looking for insurance

10 as it goes down the Java path. In each of those   11:28:41

11 three scenarios, the value of the IP-in-suit would

12 be the value of the 2006 portfolio; is that correct?

13   A   Yes, although I think you misstated

14 that. In the first one, I assume that Java --

15 that Google knows what it needs. Okay? In the   11:28:56

16 second two, Google doesn't know what it needs. It

17 just believes it might need some part of this.

18   Q   Okay.

19   A   Okay? But again, we need to be careful

20 about pushing this in a certain way to suggest   11:29:12

21 that this is a -- I mean, it would be this if it

22 had gone a different route and infringed a

23 different set of patents. It would have been this

24 if they had infringed 80 percent of the patents,

25 because it's the portfolio that they were buying   11:29:27

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```
 1    into in order to get the option or the insurance      11:29:31
 2    value.
 3        Q   I think I follow all of that.  I want to
 4    see if I can put it in somewhat different words.
 5    And if my words are wrong, then, you know, I know     11:30:01
 6    you'll tell me.
 7            Is it fair to say that you can be
 8    confident that the value of the IP-in-suit is equal
 9    in value to the portfolio because of what we know
10    about which Java technologies Google has actually     11:30:22
11    incorporated into Android?
12        A   No.
13        Q   No.
14            Can you tell me why that statement is not
15    correct?                                              11:30:30
16        A   On scenarios -- well, on Scenario 1,
17    that is true.  If Google knew which technologies
18    it was going to incorporate, then, even though
19    this is about a portfolio, in fact, the
20    negotiation was about precisely the in-suit           11:30:51
21    intellectual property, and whatever the value is
22    that these folks were bouncing back and forth is
23    the value of those -- of the in-suit.
24            In the second and third scenarios, it's
25    Google's uncertainty and lack of knowledge about      11:31:06
                                                       106
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 1    what it needed, so you can't say then, you know --    11:31:09
 2    well, whatever you said a few minutes ago doesn't
 3    make sense because it's precisely that they didn't
 4    know what they were going to do that would lead
 5    them to pay the portfolio value for the right to go   11:31:22
 6    wherever they wanted to go as the future unfolded.
                                                       107
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17   that.
18   If the jury were to apply a per-unit
19   royalty, as opposed to a percentage of revenue
20   royalty, using activations as of April 16, 2012, do   11:36:11
21   you believe there is any adjustment that should be
22   made in order to have that royalty be as of present
23   value as of the date of trial?
24   A   Perhaps, but this is really complex and
25   goes to some legal issues I don't understand, but   11:37:04

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1   let me sort of put out what -- I mean, the parties   11:37:08
2   shouldn't be able to choose, ex post, the most
3   advantageous to them. All right? These are ex
4   ante numbers, and you shouldn't be able to say,
5   well, this one works better for me than this one,   11:37:21
6   because the actual path over that period is
7   different than we anticipated. All right? That's
8   the first point.
9   The second point is that, clearly, an
10   assumption in this, an implicit assumption as I   11:37:35
11   think about it, is we're sort of talking about
12   steady-state income on these phones. And to the
13   degree there is a ramp-up, then these two numbers
14   give you slightly different numbers. But I don't
15   know the evidence on that, and I don't think   11:37:48
16   anybody has addressed it, so I have no way of
17   making an adjustment for that. But I would agree
18   that the fact that you're talking about April 2012,
19   and that you have had a lot of phones that have
20   sort of -- what's the word I want -- been --   11:38:04
21   Q   Activated?
22   A   -- activated, but don't have much
23   royalty on them yet, that's a bit of a problem.
24   So there is a steady-state assumption in
25   here.   11:38:20

111

1   Q   Okay.   11:38:21
2   Is it appropriate to include damages for
3   phones that have been activated as of the date of
4   trial?
5   A   That have not?   11:38:39
6   Q   That have, all phones that have been
7   activated as of the date of trial.
8   A   That's a legal issue.
9   Q   As an economic matter, do you have an
10   opinion?   11:38:47
11   A   Well, to the degree that Google gets, or
12   Oracle gets, a going-forward royalty, then it gets
13   a royalty on the revenues those phones will
14   generate going forward. So in that sense, it's
15   not disadvantaged by not getting the damages at   11:39:01
16   trial.
17   So suppose I have a ramp-up in which I
18   have almost no revenue now, but a lot of revenue a
19   year from now on phones that were activated before
20   trial. Then presumably, Oracle would get the   11:39:17
21   return on those phones when those revenues are
22   reported in the -- and the royalty rate was applied
23   to the royalty -- I mean, to the -- to the
24   revenues.
25   Q   To the extent that the outcome of the case   11:39:39

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1   is that there is an award of historical damages and   11:39:40
2   an injunction going forward that prevents Google
3   from using -- from infringing the patents and
4   copyrights, do you have an opinion as to whether
5   it's appropriate to calculate a per-unit royalty   11:39:54
6   based on the activations prior to the entry of the
7   injunction?
8   A   I'm not sure that matters because if
9   you -- if you -- to some degree, the per-unit
10   royalty, as I said, is a steady-state royalty, so   11:40:15
11   you've sort of taken the forward revenues and
12   awarded them to Oracle as damages as of the date
13   of trial. That would reduce Oracle's negotiating
14   position in the -- with the -- with the
15   injunction.   11:40:32
16   To the degree that you haven't done that
17   and those royalties are forward, that would enhance
18   Oracle, so it just changes sort of slightly the
19   value of the injunctive remedy, depending upon
20   whether or not more of it was loaded before the   11:40:45
21   injunction or more of it came afterwards.
22   Q   Now, in various points in your report, you
23   address the issue of incompatibility, and you also
24   talk about fragmentation; is that correct?
25   A   Correct.   11:41:23

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Pages 110 to 113

1   Q   Can you tell me how you define   11:41:27
2 "incompatibility" in the way that you have attempted
3 to compensate for it in your report?
4   A   "Incompatibility," as I understand it,
5 is a Dalvik VM versus a Java VM in Android.   11:41:46
6   Q   In considering compatibility, do you
7 consider the use of the 37 copyrighted APIs in a way
8 that is incompatible with the Java specification?
9   A   I'm not quite sure what that means. You
10 need to help me on that.   11:42:24
11   Q   Do you understand that Oracle contends in
12 this case that not only is the Dalvik VM not
13 compatible, but that the way in which Google has
14 used the Java APIs is incompatible with the Java
15 specification?   11:42:39
16   A   I understand what you just described,
17 but I frankly don't understand the legal issue
18 here. I mean, let me tell you what -- I mean, if
19 there is copyright infringement, presumably the
20 infringement occurred because Google made the 37   11:43:02
21 APIs close enough to Java APIs that Java writers
22 could, with minimal effort, write programs for
23 Android in Java that would run on Android, but not
24 run on other things. So they're not so
25 incompatible, or else they wouldn't be useful.   11:43:24

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1   Q   All right.   11:43:28
2   Let me try to --
3   Do you understand that Oracle contends
4 that Sun would not license the 37 APIs on terms that
5 would allow those APIs to be supersetted or   11:43:44
6 subsetted in comparison to the specification?
7   A   I've seen that discussion. And frankly,
8 that's technical stuff, and I have no opinion
9 about it.
10   Q   Okay.   11:44:00
11   Do you have an understanding as to
12 whether -- well, assume with me that the problem is
13 not that Google used the 37 APIs in a way that is
14 different from the way that Sun used them, the
15 specific APIs, but rather that Google used them with 11:44:16
16 other APIs that make it impossible for a program
17 written to the Android specification using the 37
18 Java APIs and the remaining Android APIs to run on a
19 Java platform?
20   A   Okay.   11:44:33
21   Q   Further assume that Sun would not have
22 agreed to that without substantial compensation.
23   A   Okay.
24   Q   All right.
25   So if that is the meaning of   11:44:40

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1 incompatibility with respect to the copyrights, is   11:44:44
2 that considered in your report?
3   A   I don't want to use weasel words here,
4 but it may or may not be. And it depends upon
5 something I don't have expertise in, and that's   11:45:18
6 how to construct and read the contracts, the
7 formal -- not the formalized contracts, but the
8 deals that were put onto paper in March of 2006.
9 And I don't know enough about how to construct or
10 think about those to know whether or not the grant   11:45:37
11 of intellectual property in the one paragraph that
12 grants it envisions that Android was free to then
13 use this -- that Google was then free to use it in
14 the way that it has used the APIs -- let me back
15 up.   11:45:56
16   If I took the 37 APIs and I licensed them
17 and Android then -- then Google then put together
18 with them other APIs, which it then sort of used to
19 propagate applications that ran on a Java VM
20 Android, if that's what's envisioned in the   11:46:15
21 license, then yes, I've incorporated it. All
22 right? Okay?
23   Q   Okay.
24   You understand that the 2006 negotiations
25 contemplated an Android that would be compatible,   11:46:30

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1 correct?   11:46:33
2   A   Right.
3   Q   Do you also assume that Sun's ability to
4 obtain the benefits of the Armstrong project
5 depended upon Android being compatible?   11:46:46
6   MR. PURCELL: Object to the form.
7   THE WITNESS: I don't know. You're
8 venturing into technical areas that I can't opine
9 on.
10 BY MR. NORTON: 11:46:59
11   Q   Is the reason why the Android revenues --
12 I'm sorry.
13   Is the reason why the Armstrong revenues
14 are included in the royalty calculation because that
15 is value that Sun expected to get in the 2006   11:47:18
16 negotiation, but did not receive in the hypothetical
17 world?
18   A   Yes.
19   Q   Okay. All right.
20   And so to the extent that Google's   11:47:30
21 infringement prevented Sun and Oracle from obtaining
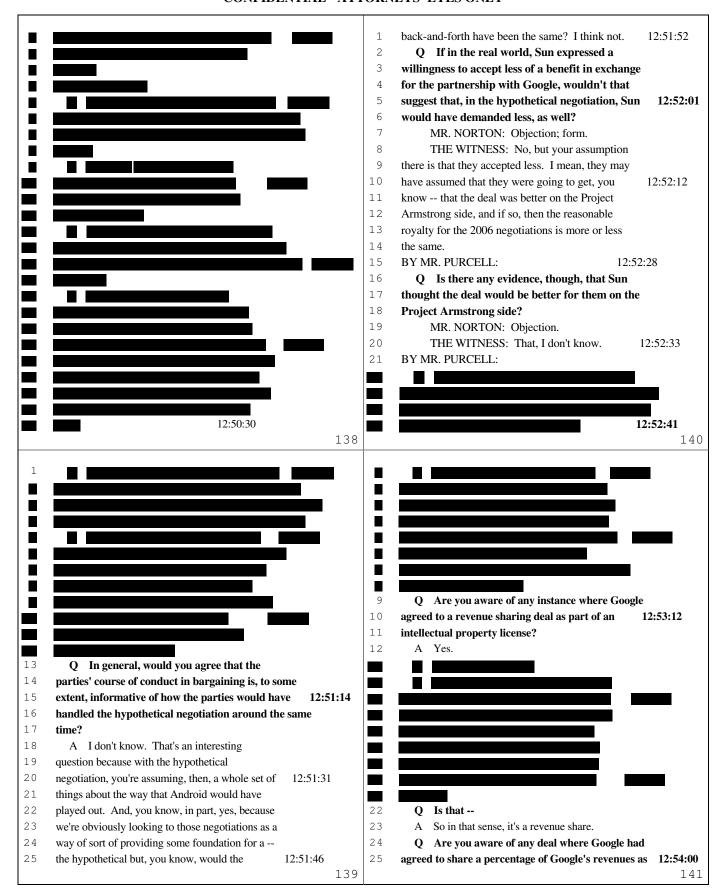22 the benefits of the Armstrong project, have you
23 fully accounted for that in your royalty
24 calculations?
25   A   I believe so, the Armstrong project   11:47:48

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1   itself.   11:47:50
2   Q   Subject to the fact that the number of
3   your calculations are conservative?
4   A   Correct.
5   Q   And so to the extent that any of your   11:47:59
6   Armstrong calculations are conservative, you would
7   have undercompensated for the harm of
8   incompatibility, correct?
9   A   I don't know. It depends upon whether
10   or not you think the Armstrong expectations are a   11:48:27
11   reasonable way of thinking about what they lost
12   when you've got an incompatible deal.
13   Q   To the extent --
14   A   If they are, then you fully incorporated
15   them.   11:48:41
16   Q   To the extent that the Armstrong
17   calculations are an appropriate way to address the
18   issue of incompatibility, your royalty addresses
19   incompatibility because it takes into consideration
20   the Armstrong projections?   11:49:00
21   A   Correct.
22   Q   Nonetheless, to the extent that your net
23   present value of the Armstrong benefit is
24   conservative, it necessarily does not capture all of
25   the harm of incompatibility, correct?   11:49:14

                                                    118

1   A   Well, I wouldn't put it that way. It's   11:49:17
2   conservative along a number of different
3   dimensions that may or may not have anything to do
4   with compatibility. So I agree that my estimate
5   is conservative, for example, the discount rate   11:49:28
6   issue that we discussed earlier. So it's
7   conservative for a number of different points that
8   I've made. All right? But that's -- that means
9   that it underestimates the true value for those
10   reasons, not necessarily for incompatibility.   11:49:45
11   Q   But if the only way in which you have
12   addressed the harm of incompatibility is by
13   factoring the Armstrong projections, then it is
14   necessarily the case that if your Armstrong
15   projections are conservative, then your adjustment   11:49:59
16   for incompatibility is conservative?
17   MR. COOPER: Objection; form.
18   MR. PURCELL: Join.
19   THE WITNESS: Sure. I mean I'll agree to
20   that. I don't know what you mean by the, "Armstrong 11:50:22
21   projections are conservative." Again, that could go
22   to the discount. I've discounted them at too high a
23   discount rate.
24   BY MR. NORTON:
25   Q   To the extent that, one, the only way in   11:50:33

                                                    119

1   which you have addressed incompatibility is by   11:50:36
2   considering the benefits that Sun expected to get
3   from Armstrong; and, two, to the extent that your
4   net present value calculation of the benefits to Sun
5   from Armstrong are conservative, it is necessarily   11:50:52
6   the case that your adjustment to compensate for
7   incompatibility must also be conservative?
8   A   Agree.
9   Q   All right.
10   Is there any other calculation in your   11:51:06
11   approach, other than the Armstrong benefits, that
12   would address the issue of incompatibility?
13   A   That I can imagine or that I considered?
14   Q   That you have --
15   Numbers that you have actually calculated   11:51:26
16   and incorporated into your analysis.
17   A   No.
18   Q   All right.
19   Now, another term that appears in your
20   report is "fragmentation." Do you understand   11:51:33
21   "fragmentation" to mean something different from
22   "incompatibility"?
23   A   Yes, with the caveat I'm not a technical
24   expert here.
25   Q   Okay.   11:51:44

                                                    120

1   Why don't you just give me the   11:51:44
2   understanding that you have employed, regarding the
3   report, as to the term "fragmentation."
4   A   Well, I have fudged the issue, as has
5   everybody else, about what the open-source license   11:51:57
6   is, whether it's the Apache license or the GPL.
7   It's my understanding -- and again, it's a
8   technical issue, so I'm not -- I may be wrong in
9   my understanding -- that the GPL would have led to
10   less fragmentation than the Apache license. And   11:52:16
11   to the degree that Android was built and
12   distributed with the Apache license, then that's
13   my understanding of incremental fragmentation,
14   okay, beyond what we talked about earlier today,
15   which was the fragmentation that was going on   11:52:30
16   anyway and would have occurred with open sourcing
17   under whatever license you would have used.
18   Q   Do you agree that the hypothetical license
19   should ideally account for the incremental
20   fragmentation that would be expected to occur as a   11:53:02
21   result of Google's infringing use?
22   A   The hypothetical license, yes, I agree.
23   Q   All right.
24   And one question that you have is, in
25   determining the incremental fragmentation, are we   11:53:23

                                                    121

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1   comparing Google's infringement to a 2006   11:53:26
2   negotiation that would open source under the GPL or
3   under Apache?
4   That was a terrible question. Let me try
5   that again.   11:53:38
6   You want to measure the anticipated
7   incremental fragmentation, right?
8   A   Yes. Based on some questions you asked
9   this morning, or earlier today, there are two
10 potential incremental fragmentations. To the   11:53:52
11 degree that Java ME was fragmented before, and
12 became fragmented in the normal course of
13 business, I don't know whether it was or it
14 wasn't, but your question implied that it may have
15 been -- there may have been some baseline   11:54:08
16 fragmentation. Then going forward, you would have
17 expected that fragmentation to continue.
18   And we had a discussion earlier about
19 whether an open-source license would have enhanced
20 that, that baseline fragmentation of Java ME. That 11:54:18
21 would have been baked into the negotiation because
22 the parties knew that -- Sun knew that it was going
23 to have a open-source license on this matter.
24 Okay?
25   Then to the degree that Sun would never   11:54:36

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1   have accepted an open-source license that was   11:54:39
2   potentially more fragmenting than a different
3   open-source license, then that would not have been
4   built in, although it may have been if they had
5   agreed on that license. It's really unclear on   11:54:56
6   which license they were going to agree on, and it's
7   my understanding that's, in part, why the
8   negotiations fell apart, was over that license.
9   Q   All right.
10   So if I understand you correctly, part of 11:55:07
11 what you're wrestling with is if Android is released
12 under the Apache license, and it was anticipated by
13 the parties in 2006 that Android would be released
14 under the Apache license, then you wonder whether
15 there is any incremental fragmentation as a result 11:55:32
16 of open source --
17   A   No. In that case, I don't wonder. In
18 that case, I assume there is not.
19   Q   As the result of open sourcing?
20   A   No, as a sole source -- yeah, that's   11:55:40
21 right, of the -- the license would have that
22 fragmentation, anticipated fragmentation, built
23 into it, the 2006, not the hypothetical, the 2006
24 license.
25   Q   Is it your opinion that the extent of   11:56:24

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1   fragmentation as a result of open sourcing would be 11:56:27
2   exactly the same, regardless of whether Sun remained
3   in control or Google remained in control, if the
4   parties had agreed in 2006 on an Apache license?
5   A   No. That's an interesting question in   11:56:53
6   that I don't think the issue of Sun's subsequent
7   control has been factored into anybody's analysis,
8   including mine, except to the degree the control
9   was embedded in the license itself, the type of
10 license. So to the degree that Sun and Google are   11:57:11
11 no longer partners in the hypothetical world, and
12 because Sun's not weighing into the development
13 here, that that -- I just don't know whether that
14 would have led to more fragmentation or not. I
15 really don't know.   11:57:28
16   Q   Well, do you understand that one of the
17 sources of fragmentation is the fact that Android is
18 incompatible, not just that it's open source, but
19 that it's incompatible?
20   A   Yes.   11:57:49
21   Q   All right.
22   And if in the 2006 negotiation the parties
23 expected that -- let's just assume the parties
24 expected they would use an Apache license for Java
25 and Android in the 2006 negotiation, but that Sun   11:58:13

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1   would remain in a position where it could ensure   11:58:16
2   that Android remained compatible with the existing
3   Java specifications.
4   In that scenario, the anticipated
5   fragmentation as of 2006 would be less than the   11:58:28
6   anticipated fragmentation as a result of the
7   hypothetical license, correct?
8   A   Possibly.
9   Q   Can you give me probably?
10   Let me ask you this way: Who has a   11:58:45
11 greater interest in ensuring that Android remained
12 compatible with existing Java? Google or Sun?
13   A   Sun did, but it's not clear that Google
14 had an interest in sort of going out and
15 specifically fragmenting. I mean, Google had an   11:59:00
16 interest in creating its own platform. And to the
17 degree that that's incompatible, that is, itself,
18 a fragmentation, I agree. That a fragment,
19 however you want to think about this, fork off of
20 this. Okay? But the reason I gave the answer I   11:59:14
21 did is my reading of the record is that Google
22 was, itself, very concerned about fragmenting the
23 Android platform. So to the degree that it didn't
24 allow for further fragmentation, one. Second step
25 is, to the degree -- and I'm going to get the   11:59:34

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1 names wrong here -- the TCK and the Android   11:59:36
2 equivalent of the TCK were more or less testing
3 the same thing, then there is no reason to believe
4 that you've got fragmentation beyond sort of
5 what -- the initial step.   11:59:47
6   Q   Right.
7   The initial step, which is, in fact,
8 fragmentation?
9   A   It is fragmentation.
10   Q   All right.   11:59:55
11   Now, with respect to the fragmentation
12 that is the result of the initial step, is there
13 anyplace in your report where you have attempted to
14 calculate the value of or the harm of that
15 fragmentation?   12:00:08
16   A   No.
17   Q   So that's unquantified throughout your
18 report?
19   A   Correct.
20   Q   And are you aware of any way of   12:00:13
21 calculating that fragmentation from the infringing
22 use?
23   A   No.
24   Q   Hold on one second.
25   I want to talk for a minute about the   12:00:37

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1   Q   Is that a economically important   12:02:05
2 difference?
3   A   Maybe.
4   Q   What consideration have you given to
5 whether it's economically important?   12:02:10
6   A   Well, we're cursed with hindsight,
7 right? I mean, the -- the smartphones have sort
8 of taken the market, although not worldwide, but
9 in the U.S., and feature phones have become less
10 important. It's unclear whether this was clear in   12:02:35
11 2005, 2006. When Sun -- or when Apple announced
12 its new iPhone, it was unclear whether this was
13 going to be a successful product or not. So at
14 the time, I don't know that the expectations of
15 these two different phones were all that   12:02:55
16 different.
17   Q   Based on the Google projections you have
18 seen, did Google expect smartphones to be more
19 valuable to its business than feature phones?
20   A   Yes.   12:03:11
21   Q   Based on the Armstrong projections, did
22 Sun expect smartphones to be more valuable to its
23 business than feature phones on a per-unit basis?
24   A   I don't know because I don't know the
25 universal business with smartphones. I know it   12:03:32

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1 Danger license. You examined the Danger license in   12:00:39
2 your report at Paragraphs 87 through 96; is that
3 right?
4   A   Yes.

12:01:53

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1 had lots of these royalty arrangements with   12:03:35
2 smartphone manufacturers, the OEMs. I just don't
3 know the universe of that.
4

15   Q   Okay.   12:04:18
16   A   But that doesn't mean that the aggregate
17 of the market was -- I mean, I could have a niche
18 that was extraordinarily profitable, but I thought
19 it was going to remain a niche, and a large
20 fraction of my business that was less profitable,   12:04:33
21 but I thought it was going to bring in a large
22 fraction. So the fact that they thought these
23 feature phones had higher per-unit expected
24 profits for them doesn't imply that this was a big
25 part of their business. I just don't know the   12:04:47

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1   evidence on that.   12:04:49
2   Q   Whether it's a big part of the business or
3   not, would you expect that a per-unit license for
4   the technology that enables a more valuable device
5   is going to be higher?   12:04:59
6   A   Yes. And I have estimated it, a royalty
7   that's higher.
8   Q   Okay.

                                            12:06:01
                                              130

It was really up in the air, as I understand   12:06:03
2   it, until Apple -- until Apple put out its phone,
3   and it turned out to be a home run. And then people
4   moved quickly towards smartphones.
5   BY MR. NORTON: 12:06:23

                                            12:07:22
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14   MR. NORTON: We're a little past noon. I
15   think I might have another hour, and then let   12:09:16
16   Mr. Purcell ask his questions. If folks would like
17   to break for lunch now, we can do that. I think
18   lunch is here.
19   THE WITNESS: Yeah. Are we off the
20   record?   12:09:30
21   MR. NORTON: We can go off the record.
22   THE VIDEOGRAPHER: This marks the end of
23   Disk 2 to the deposition of James Kearl. The time
24   is now 12:09 p.m. And we're going off the record.
25   (Lunch recess taken.)   12:09:42

Pages 130 to 133

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 1        THE VIDEOGRAPHER:  This is the beginning      12:14:16
 2   of Disk 3 to the deposition of James Kearl.  The
 3   time is now 12:45 p.m. and we're on the record.
 4             EXAMINATION
 5   BY MR. PURCELL:                       12:45:43
 6      Q   Good afternoon, Dr. Kearl.
 7      A   Good afternoon.
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                                                        12:46:21
                                                        134

                                                        12:47:31
                                                        135

                                                        137

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1   Q   In general, would you agree that the
2   parties' course of conduct in bargaining is, to some
3   extent, informative of how the parties would have   12:51:14
4   handled the hypothetical negotiation around the same
5   time?
6   A   I don't know. That's an interesting
7   question because with the hypothetical
8   negotiation, you're assuming, then, a whole set of   12:51:31
9   things about the way that Android would have
10   played out. And, you know, in part, yes, because
11   we're obviously looking to those negotiations as a
12   way of sort of providing some foundation for a --
13   the hypothetical but, you know, would the   12:51:46

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1   back-and-forth have been the same? I think not.   12:51:52
2   Q   If in the real world, Sun expressed a
3   willingness to accept less of a benefit in exchange
4   for the partnership with Google, wouldn't that
5   suggest that, in the hypothetical negotiation, Sun   12:52:01
6   would have demanded less, as well?
7   MR. NORTON: Objection; form.
8   THE WITNESS: No, but your assumption
9   there is that they accepted less. I mean, they may
10   have assumed that they were going to get, you   12:52:12
11   know -- that the deal was better on the Project
12   Armstrong side, and if so, then the reasonable
13   royalty for the 2006 negotiations is more or less
14   the same.
15   BY MR. PURCELL: 12:52:28
16   Q   Is there any evidence, though, that Sun
17   thought the deal would be better for them on the
18   Project Armstrong side?
19   MR. NORTON: Objection.
20   THE WITNESS: That, I don't know.   12:52:33
21   BY MR. PURCELL:

12:52:41

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9   Q   Are you aware of any instance where Google
10   agreed to a revenue sharing deal as part of an   12:53:12
11   intellectual property license?
12   A   Yes.

22   Q   Is that --
23   A   So in that sense, it's a revenue share.
24   Q   Are you aware of any deal where Google had
25   agreed to share a percentage of Google's revenues as   12:54:00

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1   part of a pure intellectual property license that   12:54:05
2   did not also involve distribution of Google content?
3   MR. NORTON: Objection; form.
4   THE WITNESS: I'm not sure what the last
5   clause in that question means, but it's my   12:54:19
6   understanding that Google, for placing the Google
7   widget on the boot-up screen or, at least, on the
8   screen that came up, shared revenues with OEMs.
9   BY MR. PURCELL:
10   Q   Right.   12:54:37
11   Are you aware of any other case in which
12   Google wasn't placing the Google widget on startup
13   screens where it agreed to a revenue share deal in
14   exchange just for a license of intellectual
15   property?   12:54:49
16   A   Not beyond the -- not beyond the two I
17   mentioned, no.
18   Q   Not beyond the license with Java or Java
19   ME?
20   A   Right.   12:54:58
21   Q   And what was the second one?
22   A   And the widget deals.
23   Q   Leaving aside the widget, which is what
24   I'm defining as distribution of Google content --
25   A   Okay.   12:55:07

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1   Q   -- just talking about a pure intellectual   12:55:07
2   property license, a license for a patent or a
3   copyright, are you aware of any instance other than,
4   I suppose, the Java ME deal where Google agreed to a
5   revenue share?   12:55:18
6   A   No.
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████████████████████████████
12   Let's assume that in real world
13   negotiations, Sun's initial position was that it
14   wanted $100 million, plus a revenue share.
15   Are you with me so far?   12:55:49
16   A   Uh-huh.
17   Q   Okay.
18   And then by the time negotiations broke
19   off, Sun had agreed to drop its demand to
20   $28 million without a revenue share. Again, this is   12:55:56
21   just an assumption; I'm not representing that as
22   fact.
23   But assuming those facts to be true,
24   wouldn't that suggest to you that Sun would have
25   been willing to accept less money in the   12:56:08

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1   hypothetical negotiation?   12:56:10
2   MR. NORTON: Objection; form.
3   THE WITNESS: Less money than what? It
4   suggests that they were willing to accept less money
5   in the actual negotiations, so to the degree that   12:56:20
6   the actual negotiations are a model for the
7   hypothetical, the answer is yes. But if you mean
8   less than that, because it is a hypothetical, then I
9   don't know.
10   BY MR. PURCELL: 12:56:34
11   Q   I actually meant the former.
12   So do you take account for the fact that,
13   in the real world, the last offer on the table
14   before negotiations broke down did not involve a
15   revenue share component in hypothesizing the   12:56:55
16   negotiation in your report?
17   A   The only answer I can give you,
18   Mr. Purcell, is the one I just gave a few minutes
19   ago, which is I don't know what the clause means,
20   "other terms to be determined." To the degree   12:57:08
21   that was included in the revenue share on the part
22   of Sun, I just don't think we know.
23   Q   If Sun had -- strike that.
24   ████████████████████████████████████
██ ███████████████████████████████████   12:57:24

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██ ████████████████████████   ████████████
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8   So if you look at the numerator of the
9   reasonable royalty fraction that I estimate, a
10   large -- the largest fraction of that, I mean, the   12:57:58
11   predominant number there is due to the monetization.
12   That's where Sun expected to get most of this. So
13   if you peel off these other numbers, they don't
14   change that ratio very much.
15   BY MR. PURCELL: 12:58:11
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11   Q   Are you aware of any other internal Sun
12 material that's supportive of the data you used to
13 estimate Project Armstrong revenues?
14   A   Well, we used Google's projected numbers
15 in the Project Armstrong; so to be fair, we're not   12:59:15
16 using what Dr. Leonard characterized as overly
17 optimistic.
18   Q   So you're not using the single Sun
19 PowerPoint, you're using Google forecasts?
20   MR. NORTON: Objection; form.   12:59:32
21   THE WITNESS: We're using the single Sun
22 forecast using Google's numbers rather than the
23 Project Armstrong forecast of Android.
24 BY MR. PURCELL:
25   Q   All right.   12:59:40

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1   So you're using Google's numbers with   12:59:41
2 respect to what? The number of units?
3   A   Yeah, expected under these different
4 scenarios. I think there's six different
5 projections; we take the high and the low, one   12:59:51
6 from each of the high and the low.
7   Q   All right.
8   So if you're using Google's numbers with
9 respect to the per-unit projections as to Project
10 Armstrong, what from the internal Sun projection are   01:00:05
11 you using?
12   A   We use their cost numbers, profit --
13 well, therefore, back out the profit -- the
14 per-unit profit. Everything else we use from the
15 Sun projections except we use Google's numbers in   01:00:23
16 there.
17   We do a couple of other things. We
18 discount them back, but we're using these
19 projections over the life of the project rather
20 than the three or four years in the PowerPoint   01:00:37
21 presentation.
22   And we assume that these numbers are
23 large enough that, loosely, there wouldn't be fixed
24 costs of all the costs that were variable costs, so
25 we've included more costs than, I think,   01:00:50

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1 Dr. Cockburn does.   01:00:52
2   Q   Is the only thing that you're taking from
3 the Google projection and importing into the Sun
4 Project Armstrong projection the per-unit revenue
5 number, or is there something else from Google?   01:01:01
6   A   No, we take the -- import the number of
7 units, as I remember, not the per-unit revenue.
8   Q   Right. So, okay. I misspoke.
9   So is the only thing that you're importing
10 from the Google projection into the Sun Project   01:01:15
11 Armstrong projection the number of units to be
12 activated?
13   A   Yes.
14   Q   And everything else, you're using the
15 numbers from the Sun projection with the additional   01:01:24
16 adjustments you just described?
17   A   Yes.
18   Q   One other thing that you discussed this
19 morning related to your opinion on apportionment of
20 the 2006 bundle.   01:01:39
21   Do you recall that?
22   A   Uh-huh.
23   Q   If you could just turn to Paragraph 97 of
24 your report. I believe it's Paragraphs 97 through
25 105 discuss your opinion on apportionment of the   01:01:55

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1 2006 bundle, correct?   01:01:59
2   A   Yes.
3   Q   And your opinion, ultimately, is that no
4 apportionment is economically appropriate?
5   A   That's correct.   01:02:06
6   Q   In fact, in Paragraph 101, you can take a
7 look at that.
8   At the beginning of the last sentence, you
9 state:
10   "In this case, the 2006 value   01:02:20
11   of the in suit IP is also the 2006
12   value of the Java ME IP
13   portfolio...."
14   Correct?
15   A   Correct.   01:02:28
16   Q   So are you assuming that only the two
17 remaining patents in the case and the asserted
18 copyrights out of all the IP in the 2006 bundle had
19 value to Google in building Android?
20   A   I'm not sure I understand the question.   01:02:53
21
22   What's assumed in this discussion is that
23 what was valuable to Google in building Android was
24 either the option to use what it needed to use or
25 the insurance against litigation if it happened to   01:03:08

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1   trespass or infringe a patent or something in the   01:03:13
2   course of its independent development of a Java
3   Virtual Machine for Android.
4   Q   And what component of the total -- of the
5   2006 portfolio would be attributable to these   01:03:26
6   options or this insurance as opposed to the IP that
7   was actually used?
8   MR. NORTON: Objection; form.
9   THE WITNESS: Well, the argument here is
10   that the value that somebody would pay for the   01:03:40
11   portfolio is essentially the option. What I'm
12   paying for is the option to use 0, 1, 2, 10, all,
13   and to decide that at some later date.
14   BY MR. PURCELL:
15   Q   And have you done anything to disaggregate   01:03:52
16   the value of the additional options not pursued from
17   the value of the intellectual property in-suit?
18   A   No, because it's just a single option
19   here, and the option is to go forward with the
20   development of Android and not to worry about   01:04:07
21   infringing copyrights because -- or patents
22   because they either have a license to the
23   technology or -- well, because I have a license to
24   the technology, so I'm thinking of this as a
25   single option for all of these.   01:04:20

                                                        150

1   Q   And have you done anything to disentangle   01:04:26
2   the value of having that certainty that you're not
3   going to get sued for intellectual property
4   violations from the value of just the two
5   patents-in-suit in the asserted copyrights?   01:04:37
6   A   No.
7   Q   Initially, when this case was filed,
8   Oracle asserted seven patents.
9   Are you aware of that?
10   A   I am. Let me back up and clarify an   01:04:51
11   answer I just gave you.
12   There is an apportionment part of the
13   paper later; so when you ask, have I done anything
14   to apportion the value here, the answer is yes.
15   And to the degree that the license value in 2006   01:05:05
16   reflects an option value, that's what they were
17   negotiating over, then to some degree that's -- if
18   you've done apportionment correctly, perhaps you
19   may have got some chunk of that. I don't know.
20   But I have apportioned --   01:05:22
21   Q   The apportionment section is the following
22   section of your report?
23   A   Yes.
24   Q   Section L that's entitled "Allocation of
25   the 2006 IP Portfolio .... to the Patents in Suit."   01:05:31

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1   A   Correct.   01:05:34
2   Q   Does the value in that section of your
3   report, that attempts to isolate the value of just
4   the patents and copyrights in-suit absent any
5   insurance value or value for options not pursued?   01:05:45
6   A   Correct.
7   Q   All right.
8   So back to the question that I asked, and
9   I appreciate the clarification.
10   When this case was initially filed, Oracle   01:05:57
11   asserted seven patents, correct?
12   A   Correct.
13   Q   And now we're down to two?
14   A   Yes.

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19 BY MR. PURCELL:

20   Q   And you're thinking of it as an ex ante   01:08:32

21 negotiation for an entire portfolio, not an ex ante

22 negotiation for two patents and 37 API packages?

23   A   The way I start is to say, let's think

24 about what the portfolio was worth, okay, and then

25 ask, you know, does apportionment make sense? And   01:08:47

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1   the answer is no. But if apportionment is   01:08:52

2 required by the law, then here's an apportionment.

3   Q   And why doesn't apportionment make sense?

4   A   Well, for the three reasons that are

5 here that I've already discussed, which is, if   01:09:04

6 they knew that they wanted this intellectual

7 property, then that would have been the value of

8 the deal.

9   Q   How do you know that?

10   A   Because if I'm only negotiating over,   01:09:13

11 really, 37 APIs, plus two patents, and I've got

12 all this other stuff here, then the value that I'm

13 putting forward, the numbers I'm putting forward

14 are the value of those 39 things.

15   Q   But when Google was negotiating the   01:09:33

16 license in 2006, it wasn't negotiating for a license

17 for two patents and 37 API packages, correct?

18   A   That's correct, sure.

19   Q   So how can you conclude that Google's

20 behavior in that real world negotiation over a   01:09:50

21 different set of objects necessarily is the same as

22 what Google would have been willing to pay for a

23 much smaller set of objects in the hypothetical

24 negotiation?

25   A   I think you misunderstood me. I said if   01:10:03

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1   in 2006 Google knows -- knew or expected what we   01:10:09

2 now know to be the case in 2012. The negotiation

3 in 2006 was over the stuff we're talking about in

4 2012. That was all I was saying is "if."

5   If they didn't know, then one really does   01:10:26

6 have to think about sort of an option value or an

7 insurance value. It's a little bit like -- I tried

8 to think about how to sort of get my head around

9 this.

10   Suppose I don't pay a subscription. I   01:10:43

11 subscribe to a magazine, I don't pay a

12 subscription. I get sued for failure to pay my

13 subscription, and I say, "Well, I only read one

14 page out of each hundred," okay? I mean, the ex

15 ante negotiations for the subscription is for the   01:10:57

16 full 100-page magazine. I don't get to say, after

17 the fact, "Gee, I only read one page." At least

18 that seems wrong from an economics perspective.

19   Q   And why is that analogy opposite? Why is

20 this situation where one is negotiating over a   01:11:15

21 magazine subscription rather than negotiating over

22 two patents and 37 API packages?

23   A   Because not knowing what Google needed,

24 in 2006 not knowing sort of the course of its

25 technological development, so it doesn't know   01:11:31

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1   which of these it needs, all right? Think of   01:11:34

2 this -- my analogy here, inept may it be, I don't

3 know which of the 100 pages I want to read; I just

4 know I want to read one. Then I'd be willing to

5 pay the subscription price for the right to read   01:11:47

6 whatever page I wanted to read.

7   Q   Doesn't the hypothetical negotiation in

8 this case presuppose a negotiation over just the

9 intellectual property in-suit?

10   A   I understand that is what the law   01:12:01

11 requires. This opinion simply says that doesn't

12 make a lot of sense to an economist, but -- and

13 Judge Alsup asked for my best economic view, so

14 here it is.

15   Q   So I know the answer to this question   01:12:16

16 already, but you've reviewed Judge Alsup's orders in

17 this case?

18   A   I have.

19   Q   And I'm sure you've read them carefully.

20   A   I've read them carefully.   01:12:25

21   Q   And you've reviewed the transcript of the

22 various hearings on challenges the damage experts

23 report in this case?

24   A   I have.

25   Q   Do you perceive any tension between your   01:12:32

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Pages 154 to 157

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1 opinion in Section K of your report and any of   01:12:33
2 Judge Alsup's orders or statements --
3   MR. COOPER: Objection as to form.
4   MR. NORTON: Join.
5   THE WITNESS: I can imagine there will be   01:12:42
6 some tension, yes.
7 BY MR. PURCELL:
8   Q   Do you intend to tell the jury that, in
9 your opinion, no apportionment of the 2006 IP bundle
10 is appropriate as a matter of economics?   01:12:50
11   A   I expect I'll be permitted to tell the
12 jury what Judge Alsup tells me I can tell the
13 jury, so....
14   Q   That's a very diplomatic way of putting
15 it.   01:13:05
16   So moving forward just a little bit to
17 paragraph 118 of your report, there's a section on
18 "Other Copyright Damages," and it starts with a
19 section on "Disgorgement of Infringer's Profits."
20   A   Yes.   01:13:27
21   Q   Do you see that?

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1   Q   And then in Paragraph 122, the next   01:13:45
2 paragraph, you state that neither party has offered
3 a viable methodology for separating out Android
4 profits attributable to the infringement versus
5 Android profits not attributable to the   01:13:58
6 infringement?
7   A   Correct.
8   Q   And then paragraph 124 on the next page
9 starts with:
10   "Based on the admissible   01:14:10
11   evidence in this matter, I am not
12   aware of a quantitative method to
13   estimate the percent of Android
14   revenue or profit that is due to
15   the alleged copyright   01:14:18
16   infringement."
17   Do you see that?
18   A   Yes.
19   Q   And as a result of that, you conclude that
20 the percentage of Android profit attributable to the   01:14:24
21 alleged copyright infringement is not zero but less
22 than 100 percent, correct?
23   A   Yes.
24   Q   That's a pretty broad range.
25   A   It is.   01:14:36

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1   Q   Is there any way you can narrow that range   01:14:37
2 based on the information that you have?
3   A   Not really. Again, it's unclear who had
4 the obligation to put forward the argument here,
5 but since I have to rely on the record, that's   01:15:07
6 sort of what the experts have done, as opposed to
7 going out and doing this independently, there's
8 nothing in this record that I could use to make
9 that apportionment or that division.
10   Q   If you were starting from scratch and one   01:15:21
11 of the parties retained you to address this
12 question, is there some set of information that you
13 would want them to provide to you so you could
14 apportion the percentage of Android profits
15 attributable to the alleged copyright infringement?   01:15:32
16   A   As I indicated this morning, I think the
17 shift in market share is potentially useful but
18 has been excluded, so....
19   But if I were to do it, I would probably
20 look at the shift in the market share. What   01:15:55
21 fraction of the incremental revenues was due to the
22 incremental market share due to the APIs.
23   Q   So would that be along the lines of
24 looking at the benefits provided to Android by the
25 copyrighted APIs and then the incremental increase   01:16:14

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1 in market share as a result of those benefits being   01:16:18
2 in the software?
3   A   Correct.
4   Q   And what's your understanding regarding
5 what benefits the copyrighted APIs provide to the   01:16:26
6 Android platform, if any?
7   A   That's a technical issue. I'll tell you
8 my understanding of it but not -- it's not an
9 opinion in that sense.
10   That it provided a couple of benefits   01:16:40
11 sort of going forward, that is, in 2006. I think
12 the record suggests, or at least there's argument
13 in the record that Google believed that it needed a
14 Java-based platform. It needed to appeal to Java
15 application writers or people who would write in   01:17:01
16 Java.
17   The OEMs were accustomed to using Java,
18 in fact, were taking Java ME licenses, many of
19 them. And, therefore, having APIs that said, if
20 you write in your accustomed fashion, an   01:17:16
21 application, it's going to work on this new machine
22 or this new virtual machine and/or the
23 modifications you have to make aren't very large;
24 that is, it's kind of within the genre of -- of --
25 that was one benefit to them.   01:17:43

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1   And the second benefit, as I understand   01:17:45
2 it, there is some evidence that getting to the
3 market quickly mattered, and to the degree that
4 there's testimony in evidence at trial that shows
5 that getting to the market quickly was really the   01:18:00
6 principal way to do that was through Java, then it
7 had that benefit, as well.
8   Q   You looked at Dr. Shugan's conjoint
9 analysis as part of your work in this case, correct?
10   A   I did.   01:18:15
11   Q   And Dr. Shugan, his conjoint analysis
12 included some testing and evaluation of the relative
13 importance of certain features of a smartphone
14 platform to consumers?
15   A   Correct.   01:18:29
16   Q   And I believe Dr. Shugan tested seven
17 features of smartphone platforms in his conjoint
18 analysis; is that correct?
19   A   Correct.
20   Q   And I think that you write in your report   01:18:47
21 that Dr. Shugan's omission of other potentially
22 relevant features of a smartphone platform might
23 have balanced his relative importance results,
24 correct?
25   MR. NORTON: Objection; form.   01:18:59

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1   THE WITNESS: No.   01:19:00
2 BY MR. PURCELL:
3   Q   Did I say "balanced"?
4   A   Yes, you did.
5   Q   I meant to say "biased," excuse me. Let   01:19:02
6 me say that again.
7   In your report, you concluded that
8 Dr. Shugan's omission of other potentially relevant
9 smartphone platform features might have biased his
10 relative importance results, correct?   01:19:17
11   A   Well, no, that's not quite correct.
12 There are two different kinds of biases here. I
13 think the -- my pretty extensive analysis of
14 conjoint suggests that it's likely to be biased;
15 that it omitted important things. Which direction   01:19:35
16 those biases go is a very hard thing to tease out.
17   With regard to the market share forecast
18 and predictions which use -- and I'm not speaking
19 loosely here -- use sort of a coefficient that's
20 estimated, that bias is likely to matter. In the   01:19:54
21 relative share, you have -- it's a ratio of
22 coefficients, and to the degree that the bias is
23 the same and the numerator and the denominator, it
24 cancels out, and you get an accurate estimate of
25 the relative share.   01:20:08

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1   So I suggest that it has -- it's useful   01:20:13
2 for that limited purpose, maybe not for some other
3 purposes, but -- but I also didn't go off and do
4 some econometrics in which we pull in applications
5 and get numbers that aren't a lot different than   01:20:28
6 the conjoint from actual market behavior, so....
7   Q   If we could turn to Paragraph 203, and
8 this actually, I think, is in the following exhibit.
9 In the last sentence of Paragraph 203, you write:
10   "However, the direction of   01:21:11
11   bias on Professor Shugan's results
12   caused by these omitted features is
13   ambiguous and can only be fully
14   assessed if a new survey were
15   conducted that included the omitted   01:21:20
16   features."
17   Do you see that?
18   A   Correct.
19   Q   That's what we've just been discussing?
20   A   Yes, with regard to the market share   01:21:25
21 estimates. Well, the potential bias in these
22 coefficients which might cancel out when you're
23 doing a ratio.
24   Q   Let's leave the market share calculations
25 aside and just talk about the relative importance   01:21:35

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1 features.   01:21:37
2   With the relative importance features, do
3 you have any particular opinion about the degree of
4 bias in Dr. Shugan's relative importance features?
5   A   The paragraph says it's ambiguous. It's   01:21:51
6 difficult to know which way the bias goes.
7   Q   But are you reasonably confident that the
8 bias isn't particularly significant in either
9 direction?
10   A   No, I'm not, but again, loosely, this is   01:22:01
11 the difference between using a coefficient to
12 forecasting and looking at the ratio of the
13 coefficients. And if you look at the ratio of the
14 coefficients, you could have substantial bias in
15 the numerator/denominator, and as long as it's the   01:22:17
16 same percentage, then it cancels out and you get a
17 more or less accurate estimate of the relative.
18   So to the degree that we're talking about
19 speed relative to applications and that those are
20 accurately measured by the proxies he uses, then   01:22:34
21 even if they're biased, as long as they're biased
22 in the same direction by roughly the same amount,
23 you get the right ratio.
24   Q   You mentioned some econometric work that
25 you did to validate Dr. Shugan's conclusions?   01:22:47

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1   A   I wasn't trying to validate his   01:22:51
2   conclusions. I was simply looking at an
3   independent way of trying to assess the importance
4   of speed versus applications.
5   Q   And what work did you do to try to assess   01:23:00
6   the importance of speed versus applications?
7   A   This is a long answer.
8   Q   That's fine.
9   A   Dr. Cockburn uses -- first, uses eBay
10 data and I use the eBay data. I use the same data   01:23:19
11 he does. He then uses an approach in which he
12 writes his own maximum likelihood function and
13 runs an algorithm to maximize that. He does
14 what's known in economics as a bootstrap, which is
15 a way of getting at the standard errors of the   01:23:39
16 coefficient, yes, the standard errors of the
17 coefficient.
18   When we implemented his -- we just took
19 his stuff and implemented. It takes, literally,
20 240 computer hours to run, so it's 10 days from   01:24:00
21 when you push the button until something pops out
22 the other end.
23   Dr. Leonard's criticism of Dr. Cockburn
24 was that he could write a likelihood function that
25 could be estimated much simpler that was the   01:24:15

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1   equivalent of Dr. Leonard's -- Dr. Cockburn. In   01:24:20
2   fact, he didn't need to write it; he could simply
3   use a canned program to do this. And if you use
4   his program, it takes a tenth of the time; it takes
5   12 hours or 10 hours.   01:24:34
6   So in all of the econometrics I did, I
7   did the Dr. Leonard implementation. I did not do
8   the Dr. Cockburn.
9   Now, we tested the difference, and the
10 coefficients are more or less the same in the two   01:24:50
11 to sort of the second decimal place; sometimes
12 they're a little bit higher, sometimes a little bit
13 lower. So it appears that using the more
14 simplified approach of Dr. Leonard gets you into
15 the same -- gets you roughly the same. So that's   01:25:08
16 the long lead into this.
17   Using that approach, then we went out and
18 retrieved information on applications and on the
19 various phones, brought that applications data in
20 and meshed it with the data that Dr. Cockburn had   01:25:29
21 used and estimated a version of the Cockburn model
22 using the Leonard technique with applications and
23 find that the ratio of speed to applications is
24 about .9 -- so applications to speed is about .9.
25   One other observation: Dr. Cockburn uses   01:25:58

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1   .5 as the ratio of these. We cannot find that   01:26:02
2   number in the conjoint analysis; it's nowhere to be
3   found. The number that comes out of the conjoint
4   analysis is .7, so -- and Dr. Cockburn just has a
5   single sentence in his report that says: "From the   01:26:19
6   conjoint analysis, I have learned --" or something
7   to the effect -- "that it's .5."
8   No reference, no footnote, no cite to the
9   table or anything. So that's where we are in that.
10 You can think about the econometrics as validation,   01:26:36
11 if you want, of the conjoint or an independent way
12 of looking at the relative value.
13   In my analysis in the -- back in the
14 Reasonable Royalty section, I used .8. I just take
15 the simple mean between .7 and .9 of the two   01:26:55
16 different kinds of estimates.
17   And were The Court to find that the
18 conjoint -- or the jury to find the conjoint wasn't
19 reliable for a whole set of reasons, I have an
20 independent estimate of the value of the -- an   01:27:10
21 independent way of apportioning the copyrights that
22 I don't think anybody else has at this point.
23   Q   All right.
24   And what's your independent way of
25 apportioning the copyrights?   01:27:23

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1   A   It would be the econometric.   01:27:24
2   Q   That you just described?
3   A   Yes.
4   Q   Okay.
5   Just wanted to be sure you weren't leading   01:27:31
6   into something else that you had done.
7   A   No.
8   Q   So we've gone through the universe of
9   everything you've done with respect to your
10 econometric analysis on copyright apportionment?   01:27:38
11   A   Yes. I mean, there are lots of details
12 in the econometrics themselves, but that's the big
13 picture.
14   Q   Dr. Shugan and Dr. Cockburn use -- strike
15 that.   01:27:55
16   In Dr. Shugan's and Dr. Cockburn's view,
17 the primary benefit provided to Android by the
18 copyrighted APIs was an increased number of
19 applications, correct?
20   MR. NORTON: Objection.   01:28:07
21   THE WITNESS: Correct.
22 BY MR. PURCELL:
23   Q   And they use --
24   Dr. Cockburn uses, essentially, an
25 increased number of applications as a proxy for the   01:28:13

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1 benefits provided by the copyrighted APIs, correct?   01:28:16
2   A   That's correct.
3   Q   Can you take a look at Paragraph 303 of
4 your report?
5   Paragraph 303, you write: 01:28:33
6   "Professor Shugan reports
7   relative importance estimates of
8   7.85 percent and 11.17 percent for
9   availability of applications and
10   applications startup time,   01:28:43
11   respectively."
12   Do you see that?
13   A   Yes.
14   Q   So he uses a relative importance figure of
15 7.85 percent for availability of applications,   01:28:50
16 Professor Shugan?
17   A   Yes.
18   Q   Would he be reasonable to use that
19 7.85 percent figure as an estimate of the percentage
20 of Android revenue attributable to the copyrighted   01:29:05
21 APIs as opposed to other features of the Android
22 software?
23   MR. NORTON: Object.
24   THE WITNESS: In what setting? I'm not
25 sure --   01:29:18

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1 BY MR. PURCELL: 01:29:19
2   Q   Well, in the sense of disaggregating the
3 inputs to Android revenues that are not due to the
4 copyrighted APIs?
5   A   I don't think so, no.   01:29:28
6   Q   Why not?
7   A   Well, the conjoint analysis doesn't
8 really get to revenues. It gets -- purportedly,
9 it's an estimate of the utility that people place
10 on things, but there's no way to go -- at least, I   01:29:39
11 don't see an easy path from there to revenues.
12   Q   If 7.85 percent of consumers are most
13 influenced by the availability of applications, it
14 wouldn't be reasonable to assume that roughly
15 7.85 percent of the benefit provided by the software 01:29:57
16 is due to the availability of applications?
17   A   I don't think so.
18   Q   How would you go about translating, if you
19 could, that 7.85 percent figure into an
20 apportionment of the value of the software   01:30:12
21 attributable to the APIs that enable the
22 availability of applications?
23   MR. NORTON: Objection.
24   THE WITNESS: I think you have to do it
25 the way that Professor Shugan does and Professor   01:30:28

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1 Cockburn, which is, what's the change in the market   01:30:34
2 share attributable to that, and then sort of back
3 out sort of what the revenue effects of that change
4 in market share are. You've got to go from this
5 utility measure to some measure of sort of how that   01:30:46
6 affects the prospects in the market, and there's no
7 way to go from 7.85 percent utility effect to a
8 revenue effect just by making -- by applying it
9 directly to util- -- to revenue.
10 BY MR. PURCELL: 01:31:02
11   Q   And do you have any methodology in mind
12 for translating the 7.85 percent utility effect into
13 a market share effect?
14   A   Well, that's been excluded by -- by
15 Judge Alsup. Apparently, the Sawtooth software   01:31:18
16 has a button you push, and it tells you what
17 happens to the market share. That's the button
18 that Dr. Shugan pushed. So it translates it by
19 sort of looking at all of the other sort of
20 relative utility effects, utility from the   01:31:37
21 different kinds of things.
22   But that's been excluded because, as I
23 understand the argument that Dr. Leonard made and
24 Judge Alsup and the part in Google is that because
25 of the bias, the potential bias in that number, you   01:31:52

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1 can't get a reliable estimate of the market share   01:31:56
2 change.
3   Q   Other than the Sawtooth method that
4 Judge Alsup excluded, can you think of any other way
5 to go from the 7.85 percent relative consumer   01:32:08
6 preference figure to a market share figure?
7   A   No.
8   Q   If you were asked to estimate the likely
9 change in market share if the copyrighted APIs were
10 removed from the Android software, what -- what   01:32:33
11 would you do?
12   MR. NORTON: Object.
13   THE WITNESS: I would use the
14 econometrics.
15 BY MR. PURCELL: 01:32:46
16   Q   How would you go about using the
17 econometrics to translate the consumer preference
18 share into a market share number?
19   A   Well, you can use the econometrics to
20 predict the reduction in willingness to pay, and   01:32:58
21 then, you know, there's dispute on all of these
22 matters, and I understand that; I'm not here to
23 resolve that dispute.
24   But then you could then use parties -- I
25 think Dr. Cockburn did something that was   01:33:10

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1 reasonably innovative and creative here, which is   01:33:11
2 to look at parties that were bidding -- individuals
3 who were bidding on two different phones, two
4 different operating systems, within a reasonable
5 period of time and asking if the willingness to pay   01:33:22
6 fell below a certain level, would they switch the
7 phones -- switch from one -- from an Android to
8 another non-Android phone.
9   And if they did, you just count that up
10 and divide by the number of people in the   01:33:37
11 population, or the sample you're looking at, and
12 that's a measure of the market share shift due to
13 that effect. You could do exactly the same thing
14 with -- with applications as he did with speed.
15 But to get there, as I indicated earlier this   01:33:54
16 morning, you then have to deal with -- with the
17 problem of the phone price not changing when the
18 relative -- when the willingness to pay for that,
19 so the consumer surplus -- consumer surplus falls,
20 and the question is, what would that do to the   01:34:10
21 price?
22   It got excluded on that basis, and I have
23 not done further work on that because of the
24 exclusion, but that, at least, is a sensible place
25 to start. And as I said this morning, it doesn't   01:34:26

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1 make sense to argue that price would go down   01:34:29
2 because that's the price the OEMs are selling this
3 at. It's not Google that's selling these phones.
4   So it's hard to believe that Google could
5 put a product out in the market that was less   01:34:39
6 functional and expect the OEMs to eat the
7 consequences of that, but you'd have to think about
8 how the shift would occur in that case, and you
9 might be able to do it as a composite between the
10 market share change and some predicted price   01:34:53
11 change.
12   In either case, assuming that Google has
13 to make it up to the OEMs, it's a revenue decline
14 for Google, and as I said this morning, it's not
15 clear to me that just looking at the market share   01:35:06
16 shift below and assuming the cost price doesn't
17 change doesn't get you in about the right place.
18   But once Judge Alsup cut that off, we
19 quit working on it.
20   **Q   So had Judge Alsup not excluded that piece**   01:35:20
21 **of the econometric analysis, do you think you could**
22 **have used that econometric analysis to estimate**
23 **change in market share?**
24   A   Yes, we were prepared to with what we
25 call the enhanced econometric model to actually   01:35:35

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1 look at applications in this case. The conjoint   01:35:38
2 analysis appears to be quite seriously biased
3 or -- it's got some problems that keep it from
4 being very useful in that regard, so I think you
5 had to move some other place.   01:35:58
6   **Q   Prior to Judge Alsup's excluding the**
7 **econometric analysis, have you reached any tentative**
8 **conclusions about the drop in market share that**
9 **would be likely if the copyrighted APIs weren't**
10 **available to Google?**   **01:36:10**
11   A   No, we never finished that analysis.
12   **Q   You didn't have any preliminary results**
13 **that would shed any light on that?**
14   A   We have the coefficient. We could back
15 it out pretty quickly but -- we used a coefficient   01:36:20
16 for purposes of the relative speed versus
17 application, but we never did the calculation, to
18 my knowledge. I don't recall having done the
19 calculation.
20   **Q   Is the coefficient for the speed versus**   **01:36:34**
21 **applications, is that in the report or appendices**
22 **somewhere?**
23   A   It is, it is.
24   **Q   Could you actually direct me to it?**
25   A   Sure. It's Paragraph 401, and Exhibit   01:36:47

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1 F10 provides, I think, the estimate of   01:37:24
2 coefficients. 401 is the paragraph that describes
3 the results.
4   **Q   Thank you.**
5   **I'd like to talk a little bit about your**   **01:37:40**
6 **analysis of Oracle's and Sun's lost profits from**
7 **Java ME.**
8   A   Yes.
9   **Q   Just to orient you, that discussion starts**
10 **on Paragraph 126 of your report at page 50.**   **01:37:54**
11
    01:38:18
    01:38:29
21   **Q   And in Paragraph 139, that paragraph**
22 **starts off with the statement:**
23   **"However, while I agree some**
24   **apportionment of Java ME lost**
25   **profits to the iPhone is**   **01:38:49**

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1   appropriate, I do not agree with   01:38:51
2   Dr. Cox's formula for doing so."
3   In apportioning Java ME lost profits due
4 to Android versus due to other causes, what other
5 causes did you look at?   01:39:04
6   A   The context here is, as I recall -- is
7 that Dr. Cox says the iPhone came along, all of
8 this is attributable or, at least, a large
9 fraction of this is attributable to the iPhone.
10 Dr. Cockburn response -- Professor Cockburn   01:39:21
11 responds, "No, it's not the iPhone. It wasn't the
12 effect."
13   The question really is, when you look at
14 the expected sales or expected placements going
15 forward, did they have included in them some   01:39:41
16 expectation about the iPhone? If they did, then
17 it's only the unexpected success of the iPhone that
18 would not -- would have -- sort of creates an
19 apportionment problem because, otherwise, they're
20 already there. They've already been taken out and 01:39:59
21 no apportionment is necessary.
22   So you've got to argue this is the
23 unexpected part of this. And it's hard to know
24 what the expectations with regard to the iPhone.
25 Our reading of this in 2006 is that people were   01:40:11

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1 mildly surprised that the iPhone did as well as it 01:40:16
2 did, so it appears that there were unexpected
3 results here that would not have been included in
4 the forecast.
5   Dr. Cox has a reasonably complex way of   01:40:28
6 doing this, and we just take the proportional
7 market shares, just as the paragraph says.
8   Q   But other than the iPhone, were there any
9 other factors that you looked at and considered that
10 might have caused Sun's projected forecast to fall 01:40:43
11 short in the real world?
12   A   I don't think so.
13   Q   Now, the --
14   A   I need to remind myself of what this
15 section says.   01:40:56
16   Q   Okay.
17   A   Well, the answer is, yes, we did. In
18 some cases, yes; in some cases, no.
19   Dr. Cockburn comes back and says:
20   "The strategic forecast is not   01:41:47
21   the right one to use because of a
22   variety of reasons."
23   The reasons may or may not hold water, but
24 I don't have any expertise to evaluate sort of those
25 reasons, so I simply say in Paragraph 131 that this 01:41:58

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1 is a dispute between these two experts about a   01:42:02
2 factual matter, and the trier of fact will have to
3 decide on that, not an expert. There's no economics
4 involved in deciding that.
5   Q   Sorry to interrupt, but I think you said   01:42:14
6 Dr. Cockburn had taken issue with the strategic
7 forecast.
8   Did you mean Dr. Leonard?
9   A   Dr. Leonard.
10   Q   Dr. Cockburn used the strategic forecast,   01:42:21
11 and Dr. Leonard said that was not the appropriate
12 forecast?
13   A   Yes. Sorry. I got that backwards.
14   So there's a factual dispute there that I
15 don't weigh in on. There is -- then there's a   01:42:32
16 couple of issues associated with Java ME being used
17 for non-handset devices, Blu-ray devices, soda pop
18 machines, a variety of things where Java ME is in,
19 and Dr. Cox argues they should be.
20

                                            01:43:10

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9   Q   Focusing on the issue of whether the
10 strategic forecast or some other forecast is   01:43:46
11 appropriate, if you were to adopt Dr. Leonard's
12 methodology rather than Dr. Cockburn's, do you have
13 any sense of how your bottom line number of about
14 $56 million would be affected?
15   A   Do you mean Dr. Cox's methodology or   01:44:02
16 Dr. Leonard's? Dr. Cox is -- takes on the --
17   Q   Correct.
18   If you were not to use the strategic
19 forecast but you were to use the forecast that
20 Dr. Cox prefers, have you done any calculation as to 01:44:18
21 how that would affect your bottom line?
22   A   I have not.
23   Q   Do you have any sense of how using
24 Dr. Cox's preferred forecast would affect the bottom
25 line number? Would it cut it in half? Would it -- 01:44:29

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1   A   It would be smaller, but I don't   01:44:32
2   remember the amount.
3   **Q   All right.**

d.   01:45:52

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01:47:00

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01:52:05

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01:53:11

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7   **Q   I realize this is a legal question, and so**
8 **I'm not asking for anything precise, but what's your**
9 **general understanding of the way the law treats that**
10 **prohibition on double recovery in copyright damages?**   **01:53:42**
11   MR. COOPER: Objection as to form.
12   MR. NORTON: Join.
13   THE WITNESS: I don't remember which way
14 the law goes, but you get disgorgement and lost
15 profits so long as they don't count the same thing.   01:53:56
16 What I don't know is whether you start with
17 disgorgement and then sort of go to the lost profits
18 or go to lost profits and then go to disgorgement.
19 BY MR. PURCELL:
20   **Q   Does your opinion analyze whether there's**   **01:54:08**
21 **any overlap between these different measures of**
22 **copyright damages?**
23   A   It tries to in the following way:
24 That -- that -- let me preface this by saying that
25 what the but-for world looks like is not   01:54:35

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1 particularly well specified, I think, by the   01:54:38
2 experts on either side. So presumably the but-for
3 world is an Android product that is in the market
4 but doesn't use any Sun intellectual property.
5 And so what you want to think about, then, is the   01:55:02
6 substitutes -- what's a substitute, what's a
7 complement and what's a substitute that's been
8 embedded in the -- in the actual Android product.
9

01:56:17

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[text redacted]

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[text redacted]

23   Q   All right.

24   So you don't believe you have any sort of

25   double counting or double recovery problem?   01:59:04

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1   A   I don't think so.   01:59:07

2   MR. PURCELL: All right. That's all I've

3   got. We can go off the record.

4   THE VIDEOGRAPHER: The time is now

5   1:59 p.m. and we're going off the record.   01:59:29

6   (Brief pause in proceedings.)

7   THE VIDEOGRAPHER: The time is now

8   2:01 p.m. and we're back on the record.

9   FURTHER EXAMINATION

10   BY MR. NORTON: 02:01:46

11   Q   All right. I want to talk a little bit

12   about the econometrics.

13   A   Okay.

14   Q   Now, you conclude that the -- Professor

15   Cockburn's econometric analysis is generally useful   02:01:54

16   and reliable for estimating consumer willingness to

17   pay for both speed and applications?

18   A   Yes.

19   Q   And then you actually calculate

20   willingness to pay for increased speed and for   02:02:10

21   applications; is that correct?

22   A   Correct.

23   Q   Now, I want to go through a few points on

24   Professor Cockburn's analysis.

25   He uses eBay data in his econometrics   02:02:22

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1   analysis, correct?   02:02:25

2   A   Correct.

3   Q   And you agree that that's appropriate?

4   A   I think I'm a bit more cautious about

5   that which is to say that, you know, in fairness,   02:02:33

6   we'd like to have information on new phone

7   purchases, but new phone purchases are embedded in

8   plans that are impossible -- so it's impossible to

9   disentangle the phone from the plan. And in those

10   cases, the economists look for reasonable proxies,   02:02:51

11   and the eBay data strikes me as a reasonable

12   proxy, but it has embedded in it an assumption

13   that I've not tested, and I don't think anybody

14   else can test, and that is that the -- and here

15   I'm using "relative" in a very loose way, but the   02:03:08

16   relative preferences for used phones are the same

17   as the relative preferences for new phones.

18   And all I mean by that is that since the

19   econometric estimates what economists term

20   "elasticities," that the elasticity response here   02:03:23

21   is the same for both used and new phone buyers to

22   the degree that eBay phones are used phones. I

23   don't think all of them are but to the degree they

24   are. So there is that assumption that lets you go

25   from the proxy to measuring what you really want to   02:03:40

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1 measure. 02:03:45
2 **Q Do you know whether Professor Cockburn's**
3 **analysis of eBay data included new phones?**
4 A I don't. I mean, they're stripped
5 phones, so I don't know -- I'd have to go back and 02:03:56
6 look at the data. I don't recall.
7 **Q So you're not aware of whether Professor**
8 **Cockburn has actually analyzed whether the effect on**
9 **its econometrics analysis if you look exclusively at**
10 **the new phones --** 02:04:07
11 A No, as I recall, he did that and gets
12 about the same results.
13 **Q And do you disagree with his conclusion**
14 **that when he focuses exclusively on new phones, he**
15 **gets the same results?** 02:04:18
16 A No, I don't. As I indicated in both the
17 conjoint analysis and the econometric analysis,
18 the first thing we did, as I think in response to
19 Judge Alsup's charge, was to simply ask whether it
20 was implemented as represented it was implemented, 02:04:35
21 and we were able to replicate Professor Cockburn's
22 work, all of his work, and Professor Shugan's
23 work, all of their work.
24 **Q But it's your opinion that use of eBay**
25 **data in Professor Cockburn's econometric study is a** 02:04:49

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1 **reasonable proxy?** 02:04:53
2 A Yes.
3 **Q And then you're aware of the critiques**
4 **that Dr. Leonard has made of the econometrics**
5 **analysis; is that right?** 02:05:00
6 A I am.
7 **Q And you considered those in your report?**
8 A I have.
9 **Q And you, nonetheless, conclude that the**
10 **econometrics analysis is useful and reliable --** 02:05:07
11 A Yes.
12 **Q -- as performed by Professor Cockburn?**
13 A Yes, with one exception. There is --
14 and it has to do with the memory patents that are
15 excluded. Professor Cockburn did a fix for that 02:05:25
16 that I think is problematic. Until that part of
17 the -- until those patents were dropped, I did a
18 fix that I think is better, but it was a fix, and
19 my fix gets tighter results but roughly the same
20 results as his fix did but is easier to interpret 02:05:47
21 and easier to implement.
22 This is an auxiliary regression. It
23 turns out it's embedded in the code so you actually
24 don't see the regression output, but if you see the
25 regression output, it doesn't make a lot of sense. 02:06:02

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1 And I assume that Dr. Leonard must not have seen it 02:06:05
2 because he doesn't criticize it, but you can put in
3 an alternative auxiliary regression that does make
4 sense in which the coefficients have the right
5 signs, for example, and get results similar to 02:06:23
6 Professor Cockburn's.
7 Again, let me make sure that the answer
8 here is understood in the same context as my
9 earlier answers with Mr. Purcell, which is, I'm
10 using the Leonard implementation of the Cockburn 02:06:43
11 model; I'm not estimating the 240-hour estimation
12 every time.
13 **Q Right. Okay.**
14 **And the fix that you described of**
15 **Professor Cockburn's econometric analysis, that had** 02:06:59
16 **to do with patents that are no longer in this**
17 **lawsuit?**
18 A Yes.
19 **Q Now, the -- you have an enhanced model for**
20 **willingness to pay, correct?** 02:07:14
21 A Correct.
22 **Q And you calculated a willingness to pay**
23 **value for the incremental speed benefits associated**
24 **with the '104 patent, right?**
25 A Well, I estimated, to be technical -- 02:07:32

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1 I'm careful here. I estimated the speed benefits 02:07:34
2 associated with the Linpack score, and as I made
3 clear in my report, I'm not opining on the
4 technical effect of the patents. That's a
5 different issue, but I've assumed that technical 02:07:46
6 effect of the patent is what the Oracle engineers
7 have said it is and then gone forward with that
8 assumption.
9 **Q Oracle engineers conducted tests that**
10 **would indicate the -- according to them, the effect** 02:08:01
11 **of removing the '104 patent and the '205 patent from**
12 **an Android phone, correct?**
13 A That's correct.
14 **Q And you rely on their tests?**
15 A Yes. 02:08:12
16 **Q And there are no Google tests, correct?**
17 A That's correct.
18 **Q And the Linpack score, you agree, is a**
19 **useful proxy for the speed that consumers care**
20 **about?** 02:08:23
21 A Yes, in the sense that -- it's a useful
22 proxy in that it bridges from the patent to
23 something that you can measure. It's useful in
24 that sense. I mean, we're sort of stuck with the
25 Linpack score, like it or not, because it's the 02:08:49

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1   score in which the patents' effect on speed was   02:08:53
2   measured. So in that sense, it's useful and it
3   has -- has regression validity in the sense that
4   it has coefficients that have, you know, standard
5   errors that make it reliable estimates of the   02:09:08
6   coefficients for that, but we use it because of
7   the fact that it's tied to the patents.
8   Q   And then when you did your willingness to
9   pay analysis, you assumed that the -- there would be
10   an 80 percent reduction in the Linpack score if the   02:09:34
11   '104 patent were not included in the Android phone,
12   correct?
13   A   Approximately 80 percent, yes.
14   Q   And you described that 80 percent estimate
15   as conservative, correct?   02:09:46
16   A   Yes.
17   Q   And by "conservative," that means that
18   your use of it would tend to understate willingness
19   to pay?
20   A   Could, yes.   02:09:56
21   Q   Now, the -- you conclude that consumers
22   would pay an additional $21 more for an average
23   priced Android phone if it had the incremental speed
24   benefits of the '104 patent indicated by the Linpack
25   test; is that right?   02:10:17

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1   A   Do you want to refer me to the --   02:10:19
2   Q   Sure, I'm sorry. I think you can look at
3   paragraph 400 and Table F9.
4   A   Yes.
5   Q   So do I understand correctly that based on   02:10:43
6   your econometric study, consumers would pay $21 more
7   for a phone that had the speed benefits indicated by
8   the Linpack test by the engineers than they would
9   for a noninfringing Android phone?
10   A   Yes.   02:10:59
11   Q   And you also used your enhanced model to
12   calculate willingness to pay for applications; is
13   that right?
14   A   That's correct.
15   Q   And if we look at paragraph 401, you found   02:11:07
16   that limiting the number of applications available
17   on the phone between 6,000 and 40,000 results in a
18   reduction in willingness to pay between, on average,
19   12 and $22; is that right?
20   A   That's correct.   02:11:28
21   Q   So the willingness to pay for the assumed
22   incremental increase in applications is between 12
23   and $22 per average-priced Android phone?
24   A   Correct.
25   Q   Now, if you go to Page 41 of your   02:11:42

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1   report -- let me know if you're there.   02:11:59
2   A   I'm there.
3   Q   You state:
4   "The marginal value
5   contribution of the patents and   02:12:14
6   copyrights in suit is substantial."
7   A   I'm sorry, 41?
8   Q   Paragraph 41.
9   MR. COOPER: Oh, Paragraph 41.
10   MR. NORTON: Did I say "Page"?   02:12:22
11   MR. COOPER: I thought you said "Page 41."
12   Sorry.
13   THE WITNESS: Yes.
14   BY MR. NORTON:
15   Q   So you state there: 02:12:28
16   "The marginal value
17   contribution of the patents and
18   copyrights in suit is substantial."
19   A   Yes.
20   Q   And there, are you referring to what's   02:12:34
21   indicated by the engineering assessments and the
22   willingness to pay?
23   A   Yes. I put it slightly differently,
24   which is, I'm looking at the econometric
25   evaluation of the willingness -- of the technical   02:12:51

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1   assessments.   02:12:55
2   Q   Okay.
3   And you say:
4   "Google would presumably have
5   been willing to pay up to this   02:12:59
6   amount for the in-suit patents and
7   copyrights."
8   A   Yes.
9   Q   When you say, "Google presumably would
10   have been willing to pay up to this amount," does   02:13:07
11   "this amount" refer to the per-unit willingness to
12   pay?
13   A   No.
14   Q   What does that refer --
15   A   This is a general comment that -- I use   02:13:14
16   the econometrics since it's been excluded from
17   market share for the simple proposition that the
18   consumers valued this. There's a lot of talk in
19   the record about they value speed, they value
20   applications, and so on, and what the econometrics   02:13:31
21   shows is they do.
22   And, therefore, that Google, if it had
23   understood that in 2006, would have put a high
24   value, relatively high value on the intellectual
25   property associated with achieving those gains.   02:13:48

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```
 1    But I don't have those specific numbers in mind      02:13:53
 2    here.  It's just a general notice that these --
 3    that the intellectual property here was valuable.
 4         Q   Does the --
 5         Is it possible to use the willingness to      02:14:05
 6    pay calculation to derive a per-unit royalty?
 7         A   I suppose.  I mean, there is an issue
 8    here which, as you undoubtedly know, is what I'm
 9    doing here is essentially looking at a super
10    coefficient, so I'm doing a ceteris paribus, all      02:14:31
11    things equal, and not allowed for interaction or
12    I've done anything of that sort.  I'm just looking
13    at the independent effect of this, and if you were
14    going to go down that path, at least we would want
15    to think about whether or not there were      02:15:01
16    overlapping effects rather than sort of orthogonal
17    independent effects.  I don't know.  I haven't
18    gone down that path, so I haven't given it a lot
19    of thought.  But you'd want to be concerned about
20    not counting the same thing twice, essentially.      02:15:14
```

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9   Q   Now, if you were to assume that Google did
10 not have good noninfringing alternatives to the APIs   02:19:59
11 or the '104 patent, and you also assume that the
12 willingness to pay calculations are accurate, would
13 that suggest to you that the reasonable royalty for
14 the '104 patent and for the copyrights would both be
15 substantially in excess of what you calculated on   02:20:19
16 Table 8?
17   MR. PURCELL: Object to the form.
18   THE WITNESS: I really don't think you can
19 go there, Mr. Norton. The -- the -- what -- the
20 reasonable -- I mean, the noninfringing substitutes   02:20:34
21 available to Google in 2006, as I've argued in
22 dismissing Dr. Leonard's arguments about this, are
23 embedded in the offer, so if I believe they agreed
24 to the February 2006 offer, that embeds and reflects
25 whatever noninfringing substitutes there are, and so   02:20:51

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1   you can't, then, make a side argument about that.   02:20:55
2   That's in the number that you're going to allocate
3   in this, okay?
4   Then, this goes to the issue about what is
5   an accurate way of apportioning that to these   02:21:06
6   particular patents and, you know, the difference
7   between the willingness to pay may sort of cause you
8   to think hard about whether or not the group and
9   value method got it right or was in the ballpark.
10 But beyond that, I don't think it helps. There's no   02:21:25
11 way for me to go from the willingness to pay to an
12 adjustment that I ought to make to the group and
13 value apportionment.
14 BY MR. NORTON:
15   Q   So I want to talk for a moment on   02:21:46
16 infringer's profits.
17   Now, for infringer's profits, you have
18 deducted from Android U.S. revenues its expenses
19 through September 2011, correct?
20   A   Yes.   02:22:04
21   Q   And the evidence you have for those
22 expenses is Dr. Cox's report; is that correct?
23   A   That's correct.
24   Q   And have you done anything to ascertain
25 whether or not the expenses that Dr. Cox allocated   02:22:15

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1   to Android are, in fact, correctly allocated to   02:22:20
2   Android?
3   A   Yes and no. I mean, we took the
4   expenses for what they were, and we talked about
5   the way -- or tried to analyze how Dr. Cox then   02:22:34
6   uses those -- how he accounts for those expenses,
7   whether he amortizes them, over what period of
8   time he amortizes them, and so forth. And I made
9   some criticisms about that, but we've not gotten
10 involved in sort of whether these numbers in the   02:22:51
11 Google reports are accurate. I mean, I have no
12 way of knowing.
13   Q   So you have no way of determining whether
14 or not the actual expense items that show up on the
15 P&L really are properly allocated to Android as   02:23:02
16 opposed to some other Google business operation?
17   A   I do not.
18   Q   So you just take that one on faith?
19   A   Well, I don't take it on faith. I
20 assume that, following Dr. Cox, these numbers are   02:23:14
21 right, and if at trial -- I've been careful here;
22 it's an important point, which is -- what I've
23 tried to do is set forth methodologies for doing
24 these things with an understanding that those
25 methodologies are implemented with a set of   02:23:29

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1   assumptions, some of which are empirical   02:23:31
2   assumptions, in which The Court will have better
3   evidence at the date of trial than any of the
4   experts had at the point at which they were
5   implemented. But that the methodology will work,   02:23:42
6   whatever -- whatever the evidence is at trial.
7   So if the evidence is these costs are
8   less, or they should have been amortized
9   differently, then the methodology would have -- you
10 know, I would tell the jury, if asked, that the   02:23:57
11 jury needs to make those adjustments, or I would
12 make the adjustments for the jury and present the
13 numbers to them.
14   Q   Now, on the topic of infringer's profits,
15 Mr. Purcell asked you some questions about double   02:24:13
16 recovery, and I want to approach it a little bit
17 differently.
18   When you cal- -- well, when you calculated
19 the reasonable royalty for copyright, that is based
20 on the 2000 net present value of Sun's anticipated   02:24:31
21 profits from the 2006 transaction, correct?
22   A   Using Google's estimates of Sun's
23 success, yes.
24   Q   Google's estimates of the number of units,
25 correct?   02:24:49

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1   A   Yes. That was poorly put. It's not   02:24:49
2   Google's estimates of Sun's success; it's Google's
3   estimates of Android's success.
4   Q   But the number that you are using is based
5   on Sun's anticipated profits?   02:24:58
6   A   Yes.
7   Q   So to the extent that the copyright
8   statute says that a Plaintiff is entitled to actual
9   damages --
10   I'll ask you to assume that the copyright   02:25:16
11   statute provides that a Plaintiff is entitled to
12   actual damages which can be measured as a lost
13   license or as a lost profit, and in addition to
14   actual damages, the Plaintiff is entitled to
15   infringer's profits to the extent not already   02:25:31
16   counted in the actual damages.
17   A   Okay.
18   Q   So with that understanding of actual
19   damages, is there any overlap between the
20   infringer's profits and the copyright royalty?   02:25:46
21   A   I don't know.
22   MR. COOPER: I'm going to retrospectively
23   object to the question as to form.
24   MR. NORTON: I understand. I'll stick
25   with that, though.   02:26:48

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1   THE WITNESS: Just a second. Can I talk   02:27:01
2   to my attorney off the record?
3   MR. NORTON: Let's go off the record.
4   THE VIDEOGRAPHER: The time is 2:27 p.m.
5   and we'll go off the record.   02:27:07
6   (Discussion held off record.)
7   THE VIDEOGRAPHER: The time is now
8   2:29 p.m. and we're back on the record.
9   MR. COOPER: Counsel, I've had an
10   opportunity to confer with Dr. Kearl while we were   02:29:08
11   off the record, and it's apparent that Dr. Kearl
12   didn't understand your question.
13   Can I ask you to rephrase it, please?
14   MR. NORTON: Of course. I'm sorry, that
15   was confusing.   02:29:17
16   BY MR. NORTON:
17   Q   So assume that the copyright statute
18   identifies actual damages and infringer's profits,
19   and actual damages can be measured one of two ways:
20   Either lost profits or a lost license fee, a   02:29:32
21   hypothetical license. And the copyright statute
22   further provides that the Plaintiff is entitled to
23   actual damages, plus infringer's profits to the
24   extent the infringer's profits are not taken into
25   consideration in the actual damages.   02:29:50

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1   Is that much clearer?   02:29:54
2   A   Yes.
3   MR. COOPER: And you're asking him to
4   assume that's the statement of the law?
5   MR. NORTON: I am.   02:29:59
6   MR. COOPER: Okay.
7   BY MR. NORTON:
8   Q   And then am I correct in understanding
9   that the copyright royalty that you have calculated
10   is based on anticipated profits that Sun would have   02:30:08
11   received from a hypothetical license?
12   A   Correct.
13   Q   Okay.
14   In that case, and assuming that my
15   statement of the law is correct, is there any   02:30:21
16   overlap between your measure of the copyright,
17   reasonable royalty and your measure of the copyright
18   infringer's profits?
19   A   May I ask you a clarifying question?
20   Q   Okay.   02:30:40
21   A   I mean, is what you're getting at here
22   that there could have been a difference between
23   the expected profits to which was used in
24   calculation of the reasonable royalty and the
25   actual profits that history produced? Is it a   02:30:49

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1   distinction between the forecast and actual?   02:30:56
2   Q   Well, I guess my point is just --
3   I don't believe my question depends on
4   that distinction, so obviously, my question is still
5   not clear.   02:31:07
6   If actual damages can be measured --
7   Is there anything in your --
8   Let me ask it this way: Is there anything
9   in your measure of the copyright reasonable royalty
10   that factors in Google's infringer's profits?   02:31:20
11   A   I don't think so.
12   Q   Okay.
13   A   Because the reasonable royalty is based
14   on the -- it starts, as we've discussed a number
15   of times, on the 2006 license and the implied   02:32:50
16   royalty that comes out of that, that included, not
17   infringement, but compliant Android.
18   So the projected profits don't include
19   whatever incremental profits, if any, whichever
20   they go, negative or positive, that might have   02:33:11
21   occurred because you have a -- an Android machine
22   that is not -- or an Android product that is not
23   compliant.
24   Q   Okay.
25   Now, you talked a little bit about   02:33:29

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Pages 210 to 213

1   **Professor Cockburn's group and value approach?**   02:33:30
2   A   Yes.
3   **Q   And when you were referring to Professor**
4   **Cockburn's group and value approach, you're**
5   **referring to the version of the group and value**   02:33:36
6   **approach that was permitted by Judge Alsup which**
7   **uses, in part, Professor Cockburn's lower bound,**
8   **correct?**
9   A   That's correct.
10   **Q   Have you looked at Professor Cockburn's**   02:33:47
11 **group and value upper bound approach?**
12   A   No.
13   **Q   Have you made --**
14   **Did you ever reach any opinions as to the**
15 **reasonableness of the upper bound approach?**   02:33:55
16   A   No. We simply waited for The Court to
17 decide on this matter.
18   **Q   Do you have an opinion as to whether the**
19 **upper bound approach is a reasonable version of**
20 **group and value?**   02:34:10
21   A   There are things that go different
22 directions here. One is as indicated in my
23 report. Professor Cockburn uses three studies,
24 picks one that seemed to be out of the norm for
25 the academic studies in this area, and I provide   02:34:31

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1   some evidence from a paper by John Putnam that   02:34:35
2   surveys the license renewal literature and the
3   estimates of the value function for the -- for
4   the -- for the annual literature that suggest that
5   the top 5 percent gets a lower fraction than does   02:34:54
6   Professor Cockburn. So this is the difference
7   between 77-point something and my 53.3 percent.
8   Okay?
9   So in that sense, I think he's not -- my
10 criticism here is that he could have used the   02:35:15
11 universe of studies in this area, and for whatever
12 reason, picked a subset, and the better thing would
13 be to use the universal studies in the area, in
14 which case, you come to a smaller, smaller
15 fraction.   02:35:30
16   But there is a bit of a problem in all of
17 this, and here I think Dr. Leonard gets this quite
18 wrong, and we have these synthetic portfolios --
19 let me back up. This is a long answer. Witnesses
20 are not supposed to give long answers, but my   02:35:49
21 lawyer is a nice guy.
22   MR. COOPER: We're in a special situation.
23   THE WITNESS: Let me be clear about how
24 I'm thinking about portfolio. You can think about a
25 portfolio as sort of like a stock portfolio, which   02:36:03

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1   you sort of pick a bunch of independent things, or   02:36:07
2   think of it as a conglomerate, a firm that has a
3   roll-up of a bunch of independent firms, or you can
4   think about a portfolio as a set of things that are
5   designed to do one or two, to move forward the   02:36:15
6   technology, and you might think of that in terms of
7   a vertically integrated firm that has divisions that
8   are productive because they're integrated as opposed
9   to a conglomerate that has divisions that are
10 independent of one another.   02:36:32
11   Portfolios are used loosely to describe
12 both of those, right, and typically, it's used to
13 describe the latter, that is, a group of unrelated
14 patents that happen to be assembled by somebody who
15 then is sort of licensing the patents for whatever   02:36:41
16 use in the portfolio.
17   If you think that the Java ME portfolio is
18 not that, but it's a portfolio of patents that are
19 designed to advance a particular technology, they
20 have a particular technology, then it is a bit   02:36:58
21 unlike the portfolio studies that Professor Cockburn
22 and Dr. Leonard appeal to in that they -- they're
23 unlikely to be those kind of portfolios, right?
24   And the difference here is that you could
25 imagine that there are alternative paths through   02:37:16

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1   this portfolio that are substitutes for one another.   02:37:20
2   So, for example, suppose -- to make this simple,
3   suppose there are 500 patents in the Java ME
4   portfolio, each of which is -- and there are five
5   paths, so you only need 100 patents to implement the   02:37:34
6   technology. You just need one of them. Then, in
7   fact, one -- you don't take one five-hundredths to
8   value this; you take one one-hundredth to value
9   this, and the mean value is higher, as well, because
10 it's the mean of 100. It's the portfolio divided by   02:37:52
11 100; not the portfolio divided by 500.
12   So there is this problem with the group
13 and value approach that I have, and I allude to it
14 in several different places about this portfolio
15 likely being composed of substitutes and   02:38:05
16 complements. There's no evidence in this matter. I
17 mean, people talk loosely about their substitutes
18 here, but I've seen nothing in the record that
19 allows me or Professor Cockburn or Dr. Leonard, or
20 anybody else, to tease out that, but it is a   02:38:22
21 potential problem, because it treats these 500
22 patents as if they were 500 independent patents, and
23 there are unlikely to have been 500 independent
24 patents. And to the degree there are substitutes in
25 there, this means that the group and value method   02:38:35

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 1   probably undervalues and maybe substantially       02:38:37
 2   undervalues the top 22 patents.
 3   BY MR. NORTON:
 4       Q   Thank you, that was actually quite
 5   helpful.                                           02:38:57
 6       Once you decide to use a group and value
 7   approach, do you have an opinion as to whether it's
 8   more appropriate to assume that the '104 patent is
 9   of average value with the other patents in the top
10   22 or is above average value in the group of the top   02:39:11
11   22?
12       MR. PURCELL:  Object to form.
13       THE WITNESS:  I have no evidence one way
14   or the other.  There is this citation evidence.
15   There were disputes about the citation evidence.  I   02:39:22
16   suppose if the citation evidence had been more fully
17   developed and account had been made for the fact
18   that some of the patents are shorter-lived and some
19   of the patents had been renewed, perhaps citation.
20   But the record here is really messy and, therefore,   02:39:36
21   I don't think that there's anything for me to rely
22   on that would suggest to me that this -- the
23   '104 was anything other than a group of 22 and,
24   therefore, your best guess, if you're uninformed --
25   the uninformed prior here is the mean.              02:39:55
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 1       A   I need to check on something here.  I'm     02:41:12
 2   blanking on one thing, and it goes to a question
 3   that Mr. Purcell asked me, as well, so let me
 4   clarify.
 5       I don't know if we -- if the denominator       02:41:42
 6   here is Apple plus Android or the denominator is
 7   Apple plus Android, plus all of the other operating
 8   systems, including the -- the --
 9       MR. COOPER:  BlackBerry?
10       THE WITNESS:  -- BlackBerry.  Including         02:41:59
11   BlackBerry.  If it's that, then I have accounted for
12   the BlackBerry issue, because I'm just using their
13   market share of this larger pie, in an answer to an
14   earlier question today.  And in this case, I'm just
15   using the actual shares.                           02:42:18
16       MR. NORTON:  Let me mark Exhibit 479.
17   [sic]
18       (Deposition Exhibit 579 marked
19        for identification.)
20
21
22
23
24
25                                                      02:43:07
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 1   BY MR. NORTON:                                     02:40:00
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(Text redacted)

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 9       Q   But, in fact, the number that you have in
10   row 8 is exactly the same as Dr. Cox's Exhibit 4B,   02:43:23
11   row G, and what I've marked as Exhibit 479 I'll
12   represent to you is Dr. Cox's 4B with highlighting
13   and two additional lines added for explanation.  But
14   the A through G lines are the same as they appeared
15   in Dr. Cox's report.                               02:43:47
16       A   You're correct.
17       Q   I'm sorry, what is correct?
18       A   You are correct.
19       Q   You've only said it twice, but I've made
20   you say it four times.                             02:44:13
21       To do your Table 10, would it be correct
22   to use the line that appears immediately beneath on
23   G on Exhibit 479 to determine the percent of lost
24   Java ME profits attributable to Android?
25       A   Yes.                                       02:44:39
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 1      Q   So that would --                02:44:40
 2          If you were to plug those numbers in to
 3   your Table 10, that would increase the total Java ME
 4   lost profits, assuming everything else stays the
 5   same?                                  02:44:50
 6      A   I think so.  I think you're correct.
 7      Q   You could go back and rerun those numbers,
 8   right?
 9      A   Yes.
10      Q   I'm not asking you to do that right now,    02:45:02
11   but you could make those adjustments and generate
12   new Java ME lost profits and --
13      A   Yeah, let me -- let me answer more
14   cautiously, if you'll permit, which is, it appears
15   I've made a mistake here, and to the degree I've    02:45:13
16   made a mistake, I will fix the mistake, but I'll
17   need to go back and look and see whether or not
18   the actual Excel sheets and the things we did this
19   with, in fact, reflect the mistake and whether it
20   was a mistake.                         02:45:30
21          So if it's a mistake, I will notify both
22   parties that I've made an error in this case, of
23   course.
24   ███ ███ ████████████████████████████
25   ███ ██████████████████████████████    02:45:43
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 1   ███ █████████████████████████  ██████
 2   ███ ██████████
 3   ███ ██  ██
 4   ███ ██  ████████████████████████
 5   ███ █████████████████████████████  ██████
 6   ███ ███████████████████████████
 7   ███ ██  ██████████████████████
 8   ███ ██████████████████████████
 9   ███ ███████████████████████
10   ███ █████████████████              02:46:16
11          MR. NORTON:  Thank you very much.  I
12   appreciate your time today.  I have nothing further.
13          THE VIDEOGRAPHER:  This marks the end of
14   Disk 3 of 3 and concludes the deposition of James
15   Kearl.  The time is now 2:46 p.m. and we're going    02:46:28
16   off the record.
17          Thank you, Counsel.
18          (Time noted:  2:46 p.m.)
19
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 9               additional lines
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EXHIBIT H

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User Fields

User 1	User 9
User 2	User 10
User 3	User 11
User 4	User 12
User 5	User 13
User 6	User 14
User 7	User 15
User 8	

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All Phone	*Ext.*	*Home Address 1*	
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Status

Last Reach	ID/Status
Last Meeting	Last Results
Last Attempt	Public/Private Public

Notes/History   Date Range: All Dates

Note	11/12/07	5:44 PM	Google today released the Android S/W SDK.
Note	5/26/06	7:53 PM	After many meetings incl. Alan Brenner, it was agreed that the two companies cannot come to a meeting of minds on how to work together re CDC-HI and open source.
Note	8/19/05	7:52 PM	Andy is interested in CDC-HI for wireless devices.
Note	8/5/05	10:45 PM	Andy informed me today that the co. by which Android Research was acquired was Google. Vineet and I w/meet w/Andy and Tim Lindholm at on Fri. 8/19 at Google.

Created 2/26/2011 at 11:34 AM   1

OAGOOGLE0100029446

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
TRIAL EXHIBIT 2720
CASE NO. 10-03561 WHA
DATE ENTERED _____
BY _____
DEPUTY CLERK

Trial Exhibit 2720 Page 1 of 1